

People’s Republic of China

Ex-Post Evaluation of Japanese ODA Loan Project

“Broadcasting Infrastructure Improvement Project (Jilin Province)”

External Evaluator: Yukako Matsuura, International Development Center of Japan Inc.

**0. Summary**

The goal of this project was to improve the broadcasting programs of Jilin Province both in quantity and quality in order to enhance levels of education, knowledge, and culture of the citizens and to deepen mutual understanding between Japan and China, by supporting innovations in equipment and providing training opportunities to the Jilin TV Station, Jilin Education TV Station, and Jilin TV University. The project was in line with China’s development policies and needs as well as Japan’s ODA policy; therefore, the project is relevant. The project was completed within the planned budget and the planned period; thus, its efficiency is high. The upgrading of broadcasting equipment (hardware) and skills (software) appears to have contributed considerably to increasing the levels of education, knowledge, and culture of the citizens. The degree of the project’s impact on promoting mutual understanding between ordinary citizens of Japan and China could not be precisely assessed because the overall number of foreign programs in broadcasting has been decreasing, including programs with Japanese contents. Nonetheless, training in Japan and coproduction opportunities facilitated the collaboration between Japanese and Chinese broadcasting stations, and the broadcast coproduced program as well as the contents that introduced Japanese culture and entertainment seem to have promoted a mutual understanding of the two nations to some extent. The effectiveness and the impact of the project are therefore high. Institutional, technical, and financial sustainability is excellent and ensured the sustainable impact of the project.

In light of the above, this project is evaluated to be highly satisfactory.

**1. Project Description**



Project Location



Recording of a show at Jilin TV Station

**1.1 Background**

The broadcasting stations in China are operated at central, provincial, prefectural, and county levels

and are supervised by governments at the corresponding levels. While broadcasting already had a significant impact on citizens in China with national television coverage reaching 94% of the population in 2001, the Government of China aimed to increase that coverage to 97% by 2010 to improve the communication of information and cultural and living standards through broadcasting for further socioeconomic development. Jilin Province, the target region of the project, had a population of 26.37 million people in 2001 and had achieved an average 10% GDP annual growth from 1996 to 2000 under the 9th Five-Year Plan. The province had a certain competitive edge in domestic and external markets supported by vast agricultural production (Jilin was named as “a leading agricultural province”) and by rapidly growing industries such as automotive and petrochemical industries where Japanese firms promoted business consortiums. The broadcasting sector had been considered as key to extending knowledge about culture, education, disaster preparedness and prevention, science and technology, and to promote cultural exchange; accordingly, a broadcasting network and system was already established to a considerable extent. Nevertheless, the broadcasting profitability in the province was lower than the national average. Dominantly analog facilities and equipment were becoming obsolete owing to a financial shortage. This outdated technology created problems for program production including educational programming.

Under the circumstances, the project was implemented to improve the broadcasting programs of Jilin Province both in quantity and quality so that it would enhance the levels of education, knowledge, and culture of the citizens, and deepen mutual understanding between Japan and China. The project also planned to introduce Japanese broadcasting technology and equipment to China through the Special Terms for Economic Partnership (STEP).<sup>1</sup>

1.2 Project Outline

The objective of this project was to improve the broadcasting programs of Jilin Province both in quantity and quality, thereby contributing to enhancing the levels of education, knowledge, and culture of the citizens, and by deepening mutual understanding between Japan and China.

<ODA Loan Project>

Loan Approved Amount/ Disbursed Amount	4,375 million yen / 4,332 million yen	
Exchange of Notes Date/ Loan Agreement Signing Date	March 2004 / March 2004	
Terms and Conditions	Interest Rate	0.75%
	Repayment Period (Grace Period)	40 years (12 years)
	Conditions for Procurement:	Prime contract: Tied (Japan) Subcontract: General Untied

<sup>1</sup> JICA approved five other broadcasting projects in China at the same time as the Jilin project. The target areas of these five projects were Jinan City of Shandong Province, Qinghai Province, Yunnan, Anhui Province, and Ningxia Hui Autonomous Region.

Borrower / Executing Agency	Government of the People's Republic of China/People's Government of Jilin Province
Final Disbursement Date	August 2012
Main Contractor (Over 1 billion yen)	n/a
Main Consultant (Over 100 million yen)	n/a
Feasibility Studies, etc.	“Feasibility Research Report: Project of Jilin Province Radio & TV System and Electrified Education Carrying Out Equipment Innovation by Using of Japanese Government's Loan” by Jilin Province Technological Company of Engineering Consultation in June 2003.
Related Projects	Grassroots Grant Aid (JPFY1997) “The Improvement of Broadcasting System for Jilin Education Television (Jilin Province)” (91,485 USD)

## 2. Outline of the Evaluation Study

### 2.1 External Evaluator

Yukako Matsuura, International Development Center of Japan Inc.<sup>2</sup>

### 2.2 Duration of Evaluation Study

Duration of the Study: August, 2014 – January, 2016

Duration of the Field Study: November 30 – December 9, 2014, and March 9 – March 13, 2015.

## 3. Results of the Evaluation (Overall Rating: A<sup>3</sup>)

### 3.1 Relevance (Rating: ③<sup>4</sup>)

#### 3.1.1 Relevance to the Development Plan of China

The Government of People's Republic of China in its national and provincial policies has emphasized the importance of television and radio broadcasting as a means to consistently accelerate and expand developed living, from the time of the 10<sup>th</sup> Five-Year Plan (2001–2005), which was effective at the project appraisal, to the 12<sup>th</sup> Five-Year Plan, which was effective at the ex-post evaluation (2011–2015). For the current 12<sup>th</sup> Five-Year Plan, the State Administration of Press, Publication, Radio, Film and Television of the People's Republic of China (SAPPRFT) set a clear target to attain 99% radio and television coverage of the population by 2015 in order to improve quality of broadcasting and digitalize communication infrastructures including broadcasting. Strong emphasis was placed on improving broadcasting quality and quantity from the project appraisal to the ex-post evaluation. In particular, Jilin Province has taken the initiative to bolster broadcasting in collaboration with the private sector for the growth of the media industry.

<sup>2</sup> The evaluator belongs to International Development Solutions, Inc., and supported International Development Center of Japan Inc., with this ex-post evaluation.

<sup>3</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>4</sup> ③: High, ② Fair, ① Low

Based on the above facts, the consistency between the development policies of national and provincial governments and the project has been maintained from the appraisal to the ex-post evaluation.

### 3.1.2 Relevance to the Development Needs of China

From the project appraisal to the ex-post evaluation, broadcasting in Jilin Province, which is regarded as a crucial sector for social and economic development, has functioned as a major communication means of disseminating knowledge on culture, education, disaster preparedness/prevention, and science and technology, and to promote cultural exchange. In addition to broadcasting, which targets a general audience, the province also aimed to bolster human resource development and education levels in the province by strengthening the functions of Jilin Education Television and Jilin Television University. These needs were unchanged throughout the project. The profitability of the broadcasting sector in Jilin was lower than the national average at the project appraisal. Moreover, the facilities and equipment were dominantly analog owing to a budget shortage, which led to a low quality of broadcasting technology and infrastructure and significantly hindered program production. Under such circumstances, this project was relevant to the needs of the broadcasting sector in Jilin Province. The project did upgrade hardware and improved production quality and efficiency with the installation of new facilities and devices.

Japanese products such as video cameras, recorders, monitors, and switchers were regarded as top-ranking products in the Jilin broadcasting industry and were well known for easy maintenance. In particular, video cameras and recorders were considered to have minimal competition in the marketplace. The application of STEP conditions was therefore regarded to be relevant with unchanging high standards and advantages of Japanese products throughout the project from the appraisal to the ex-post evaluation. Advanced information technology and new media have recently become major means for production, broadcasting, and data storage. As a result, the necessity of video recorders and some other equipment has started shrinking. Moreover, Chinese manufacturers of broadcasting equipment have made rapid progress in the market; accordingly, the comparative advantage of Chinese products is increasing, particularly in terms of cost performance.

### 3.1.3 Relevance to Japan's ODA Policy

At the project appraisal, Japan's Economic Cooperation Program for China set policies to provide stimuli for promoting the market economy and expanding economic relations with private sectors, with which the project purpose aligned. The project also intended to increase human resource development through the support of Jilin TV University, and therefore was in line with the Medium-Term Strategy for Overseas Economic Cooperation Operations of JICA 2002–2005 and the Country Assistance Strategy for China (2003) that listed human resource development as a prioritized agenda item for cooperation.

From the above, this project has been highly relevant to the China’s development plan and development needs, as well as Japan’s ODA policy. Therefore its relevance is high.

3.2 Efficiency (Rating: ③)

3.2.1 Project Outputs

The project assisted Jilin TV Station, Jilin Education TV Station, and Jilin TV University in two aspects: (1) a “hard component” of upgrading broadcasting equipment and facilities and (2) a “soft component” of training programs for their staff. A comparison between the project plan and the actual output is as follows:

(1) Upgrading “Hard Component” (Strengthening the broadcasting infrastructure)

Table 1: Planned and Actual Project Output (Hard Component)

	Planned Output	Actual Output (Underline indicates changes)	Reason for change
Jilin TV Station (JLTV)	<ul style="list-style-type: none"> <li>Facilities of broadcasting center (studio renovation, elevators, air conditioners, etc.)</li> <li>Studio equipment (digital cameras, recorders, editors, monitors, etc.)</li> <li>Broadcasting van</li> <li>Construction of broadcasting center (ODA loan not applied)</li> </ul>	<ul style="list-style-type: none"> <li>Facilities of broadcasting center (studio lighting, TV transmitting equipment, elevators, air conditioners, uninterruptible power system, etc.)</li> <li>Studio system and digital TV broadcasting system (digital cameras, recorders, editors, monitors, etc.)</li> <li><u>Digital radio recording and transmitting system*</u></li> <li><u>Media resource control system (added)</u></li> <li>Broadcasting van</li> <li>Construction of broadcasting center (ODA loan not applied)</li> </ul>	<ul style="list-style-type: none"> <li>Urgent procurement became necessary with air conditioning system, power supply system, and transformers along with the construction schedule of broadcasting center (ODA loan not applied). While these items were eventually procured with their own budget for timely installation, end devices such as air conditioners and UPSs were covered by the ODA loan as planned.</li> <li>The balance generated by the change was allocated to additional devices such as media resource control system (IT devices) and part of the digital radio recording and transmitting system.</li> </ul>
Jilin Education TV Station (JLETV)	<ul style="list-style-type: none"> <li>Studio equipment (digital cameras, recorders, editors, nonlinear editing system, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Studio equipment (digital cameras and editors)</li> <li><u>Broadcasting van with digital system (replacement of studio system)</u></li> <li>Nonlinear editing system</li> </ul>	<ul style="list-style-type: none"> <li>Instead of studio systems with 3 and 4 channels, a broadcasting van with digital mobile system of 6 and 1 channels was added for outdoor recording at large events in various localities.</li> <li>Two high-definition television cameras were also added.</li> </ul>

<p>Jilin TV University (JLTVU)</p>	<ul style="list-style-type: none"> <li>▪ Studio equipment (virtual channel studio system, high-definition television cameras and recorders, digital captioning system, etc.)</li> <li>▪ Construction of the university building (ODA loan not applied)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Studio equipment (virtual channel studio system, high-definition television cameras and recorders, digital captioning system, digital audio workstation, lighting devices, etc.)</li> <li>▪ <u>IT system (computer server, network devices, video conference system, etc. *virtual channel studio system was canceled)</u></li> <li>▪ Nonlinear editing systems for high definition and networks</li> <li>▪ <u>Office and classroom facilities (added)</u></li> <li>▪ Construction of the university building (ODA loan not applied)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Virtual channel studio system and high-definition television cameras turned out to be incompatible. The virtual channel studio system and some other accessory devices were canceled, and IT systems were alternatively added to meet the increasing needs for distance education through Internet.</li> </ul>
------------------------------------	---	--	---

Source: Documents provided by JICA and the executing agency (Questionnaire response)

\* The items listed in the original plan were included in the digital radio recording and transmitting system.

The replacement of procurement items mentioned above was considered necessary and reasonable in light of the project purpose to improve broadcasting quality. Proper procedures were taken to replace the items; therefore, the changes were assessed as appropriate for enlarging the project effects. For example, the replacement of a studio system with a broadcasting van with a digital system enabled Jilin Education TV Station to produce programs that gave the audience a vivid impression as if they were in the broadcasting localities. Jilin TV University, in response to the rapidly growing needs of Internet users, decided to replace a virtual channel studio system with an IT system and video conference system. That change enabled the university to establish an IT backbone network and to greatly improve the conditions for distance learning and educational activities. It also made real-time communication possible with local TV universities.

## (2) Strengthening “Soft Component” (Training programs for broadcasting personnel)

The soft component of the project was expected to provide opportunities for multiple purposes: training of technical personnel from the broadcasting stations and the university on program production and facility/equipment maintenance, training of executive personnel on improvement of broadcasting management and operations, purchasing of broadcasting rights of Japanese content, and coproduction with Japanese broadcasting stations. A comparison between the planned and actual outputs is presented below (Table 2):

Table 2: Planned and Actual Project Output (Soft Component)

	Planned Output	Actual Output (Underline indicates changes)	Reasons for change
Jilin TV Station (JLTV)	<ul style="list-style-type: none"> <li>• Training on program producing, editing, and broadcasting</li> <li>• Purchasing of broadcasting rights for Japanese content</li> <li>• Coproduction with Japanese broadcasting stations</li> </ul>	<ul style="list-style-type: none"> <li>• Training and discussions on program producing and editing, high-definition TV technology, and media control (1 week × 40 persons, 2008–2009)</li> <li>• Participants: 10 staff of production and editing unit, 9 staff of media resource management unit, 10 technicians, and 11 executive members.</li> <li>• No purchase of broadcasting rights</li> <li>• No coproduction</li> </ul>	<ul style="list-style-type: none"> <li>• Initial idea of training for the three entities were for total 15 persons (JLTV 11 persons, JLETV 2 persons, and JLTUV 2 persons) receiving 3-month training. However, in the end, JLTV 40 persons, JLETV 3 persons, JLTUV 2 persons visited Japan in several groups and took 6–10 days training.</li> <li>• The reason for shortening the training was because 3 months' absence of the core personnel in charge of the facilities was regarded as hindering the smooth implementation of the project as well as daily broadcasting operations.</li> </ul>
Jilin Education TV Station (JLETV)	<ul style="list-style-type: none"> <li>• Training on program producing, editing, and broadcasting</li> <li>• Obtaining content from the National Institute of Multimedia Education (NIME-WORLD) under Japan's Ministry of Education, Culture, Sports, Science and Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Training on program producing, editing, and broadcasting (approx. 1 week × 3 persons, 2008)</li> <li>• Coproduction of a program (4 crew members visited for shooting in March 2009 and produced a 30-min program titled "Environment-Friendly Lifestyle: Make It a Habit" with the support of NHK)</li> <li>• No program obtained from NIME-WORLD</li> </ul>	<ul style="list-style-type: none"> <li>• Duration of the 3 months was also assessed as too long to acquire operational skills for the installed facilities and equipment. In fact, there was no trouble reported during and after the project in handling the facilities and equipment despite the shortened training time.</li> </ul>
Jilin TV University (JLTUV)	<ul style="list-style-type: none"> <li>• Training on program producing, editing, and broadcasting</li> <li>• Collaboration with the Open University of Japan</li> </ul>	<ul style="list-style-type: none"> <li>• Training on program producing, editing, and broadcasting (approx. 1 week × 2 persons, in 2008)</li> <li>• No collaboration with the Open University of Japan</li> </ul>	

Source: Documents provided by JICA and the executing agency (Questionnaire response)

The number of training participants and duration of training were adjusted as noted above within the project framework in order to harmonize the timing of hardware installation and the soft component of the training schedule. Accordingly, the change was considered to be realistic and appropriate. On the one hand, the purchase of Japanese content could not be realized in the course of the soft component, owing to the restriction of imports and broadcasting of foreign programs that was enacted by the State Administration of Radio, Film and Television of the People's Republic of China at that time (currently SAPPRFT) after the project commencement. On the other hand, one program on environmental protection was coproduced between Jilin Education TV Station and Japan Broadcasting Corporation (NHK) and broadcast.

Some participants of the training in Japan commented on the necessity of allocating translators with sufficient knowledge of technical broadcasting terms, and possibly a few more such translators allocated in light of the participants' number to facilitate better absorption of skills and knowledge. These comments dealt with further improvement of the training but did not deny or reduce the effectiveness of the conducted training.

### (3) Effect of STEP Application on Output

The project was implemented under the STEP rules specifying the prime contractor to be a Japanese firm (Japan-tied) and the country of origin rate of Japan to exceed 30% of the total contract amount. The rules were duly observed, and the share of the products of Japanese origin turned out to be 45.5%, which far exceeded the expected share of 32.4% at the appraisal. The satisfaction of the executing agency with the STEP application was high and was reported as follows: Japanese products and brands were numerous available in the broadcasting market; therefore, the procurement conditions were easily met. The contractors responded well to the procurement process and delivered goods and services promptly. The training and after-sale services were also appropriate.<sup>5</sup> However, there were some comments that the executing agency generally understood the STEP rules and procedures at the project appraisal, but that full comprehension of the detailed procedures was only possible at the implementation stage owing to their complexity. This, however, did not hinder the project implementation.



Setting up the large studio at Jilin TV Station



Japanese products yielding 90% of the studio

## 3.2.2 Project Inputs

### 3.2.2.1 Project Cost

The estimated total cost was 5,363 million yen, consisting of foreign currency of 4,375 million yen (namely, the Japanese ODA loan) and Chinese currency equal to 988 million yen. The actual total cost was 5,090 million yen (95% of the planned cost), including the facility costs for constructions of the Jilin TV Station broadcasting center and the Jilin TV University building (the

<sup>5</sup> Based on the STEP questionnaire response and interviews with the executing agency.



cost of engineering work is excluded) born by the China side but not by the Japanese ODA loan. The total Japanese ODA loan was 4,332 million yen, and thus was kept within budget (99% of the estimate).

Table 3: Planned and Actual Project Costs

(Unit: million yen)

Category	Planned				Actual			
	Foreign Currency	Local Currency	Total		Foreign Currency	Local Currency	Total	
	ODA Loan	Other Fund	Grand Total	ODA Loan	ODA loan	Other Fund	Grand Total	ODA Loan
Equipment	3,985	940	4,925	3,985	4,260	695	4,956	4,260
Training	17	0	17	17	43	0	43	43
Price escalation*	103	1	104	103	—	—	—	—
Contingency	205	47	252	205	—	—	—	—
Consulting services	65	0	65	65	23	66	90	23
<b>TOTAL</b>	<b>4,375</b>	<b>988</b>	<b>5,363</b>	<b>4,375</b>	<b>4,328</b>	<b>762</b>	<b>5,090</b>	<b>4,328</b>

Source: Documents provided by JICA and the executing agency (Questionnaire response)

\* Price escalation is a reserved fund for a cost rise during times of inflation

Exchange rate: 1 yuan = 14.3 yen at appraisal. 1 yuan = 13.7 yen at ex-post evaluation (average of the loan period).

Note: The number indicated in actual foreign currency does not include the Japanese ODA loan commissions (0.1%). The numbers after the decimal points were rounded down, which caused a slight error in the total figure.

With regard to the balance between inputs of equipment, training, and consulting services, the executing agency prioritized the equipment followed by the training, but had no intention of requesting consulting services to assist with procurement procedures from the Japanese side. JICA entered negotiations with the executing agency to minimize the procurement package with consulting services, and finally fixed the cost for consulting services through the Japanese ODA loan to be 23 million yen, which was reduced to 35% of the originally allocated 65 million yen in the plan. The balance generated from this change was added to the training. The consulting services were provided in a way to ensure the compatibility of the procured equipment and facilities and the existing systems as well as the best match among the new devices, to specify the items in need of update with rapid advances in technology, and to thoroughly examine the adherence to specifications. As a result, the best-fitting products were installed to set up fully functional broadcasting systems, which led the higher satisfaction of the executing agency. In sum, the project inputs were assessed as appropriate.

In the course of procurement, the project added two packages of equipment for the Jilin TV Station, as shown in Table 4. This increased the total number of packages in the project to 10. Some of the devices were taken out from their original packages and placed in new packages with additional items to harmonize the package-based procurement with the construction progress of the broadcasting center and to sort the packages according to the responsible units of the equipment. The procurement method was also changed upon the rearrangement of packages to procure some items urgently for timely installation based on the schedule of engineering work in the construction

of the center: from procurement through International Competitive Bidding (ICB) with prequalification to ICB with post qualification.

The changes in the packages facilitated a smoother procurement because the packages were rearranged in line with units using the devices. Accordingly, the best person in charge of the devices could handle the procurement process in a responsive manner. The change in procurement methods was examined and duly approved in advance based on the confirmation of the following conditions: the estimated sum of the package would be less than 1 billion yen, the technical specifications of the procured items would be simple enough not to require a complex contract, and the post qualification would be ensured during the bidding with the support of the consultant. There were no problems observed in changing the procurement method.

Table 4: Comparison of Planned and Actual Procurement Packages  
(Unit: million yen)

Package	Planned		July 2006		Actual		Remarks
	Total	Japanese origin products	Total	Japanese origin products	Total	Japanese origin products	
1. TV transmission equipment	261	81	261	81	374	41	
2. Studio equipment, broadcasting van	869	209	869	209	830	401	
3. Cameras and video equipment	285	285	285	285	313	291	
4. Building cabling system, air conditioning, power supply system, elevators	652	153	652	153	266	185	Some items were excluded from the list for self-fund procurement
5. Studio lighting system	321	29	321	29	413	10	
6. Studio system facilities, network system	1,156	391	1,156	391	827	564	
7. Equipment for Jilin Education TV Station	n/a	n/a	177	104	225	125	
8. Equipment for Jilin TV University	n/a	n/a	439	244	307	156	
9. Digital radio recording/broadcasting system for Jilin Radio Station	—	—	—	—	285	17	2 packages were added to the balance of Package 4
10. Media resource control system for Jilin TV Station	—	—	—	—	417	143	
Total	3,546	1,151	4,163	1,500	4,260	1,938	

Source: Documents provided by JICA and the executing agency (Questionnaire response)

Note: The numbers after the decimal points were rounded down, which caused a slight error in the total figure.

### 3.2.2.2 Project Period<sup>6</sup>

The executing agency and the Japanese side took time to discuss the range and contents of the consulting services, which caused a two-year delay in beginning procurement procedures, from the initially planned October 2004 to October 2006. As a result, the equipment procurement was greatly delayed. Nonetheless, the delay was recovered in a half year with the change in the procurement method, and all facilities and equipment were delivered by December 2009. Consequently, the project period was mostly as planned (Table 5).

Table 5: Actual and Planned Project Period

	Planned	Actual
Entire project	March 2004 (Signing of Loan Agreement)–December 2009 (70 months)	As planned
a) Procurement of equipment	October 2004–June 2008	October 2006–December 2009
b) Training	October 2004–December 2009	September 2008–April 2009 (Including coproduction tour )
c) Consulting services	April 2004–December 2009	February 2006–December 2008

### 3.2.3 Results of Calculations of Internal Rates of Return

The effectiveness of this project was expected to be measured by various aspects such as the upgrading of the broadcasting infrastructure; mutual understanding between Japan and China through training, obtained Japanese content, and coproduction; increase of public awareness of the environment and sanitation; advocacy of market rules, and so on. The internal rate of return was limited to measure these various effects quantitatively and comprehensively; therefore, the data was not calculated at the project appraisal or at the ex-post evaluation.

In sum, both the project cost and project period were within the plan. Therefore, the efficiency of the project is high.

## 3.3 Effectiveness<sup>7</sup> (Rating: ③)

Effectiveness of the project is assessed as follows based on the pre-decided operation and effect indicators at the appraisal (which include viewers, airwave coverage of the population, number of students at Jilin TV University, and other quantitative indicators) as well as an analysis of qualitative effects achieved by the TV stations and the university with regard to improvement in broadcasting programs and content for distance learning.

### 3.3.1 Quantitative Effects (Operation and Effect Indicators)

The number of viewers and airwave coverage of the population reached its target percentage of

<sup>6</sup> In this ex-post evaluation, the completion of the project is defined as the completion of all project components, namely, procurement of equipment, training, and consulting services.

<sup>7</sup> Sub-rating for Effectiveness is to be put with consideration of Impact.

97.5% by the target year 2011. The number of students at Jilin TV University was 43,074 in 2012, one year after the target year of 2011. This well exceeded the target of 38,000 students in 2011. Furthermore, the number of students in 2014 increased approximately 1.7 times over that of the appraisal. Therefore, the project is assessed to have achieved sufficient operational effect (Table 6). In addition, whereas the State Administration of Press, Publication, Radio, Film and Television of the People’s Republic of China in the 12<sup>th</sup> Five-Year Plan aims to achieve a 99% airwave coverage of the total population by 2015, the Jilin Province had already attained 99.2% in 2011.

Table 6: Operation and Effect Indicators

Indicators	2003 Baseline	2011 Target Two years after completion	2009 At completion	2011 Two years after completion	2013 Most recent data
Viewers (Jilin Province)	2,116,000 households	3,500,000 households	2,961,000 households	3,500,000 households	4,400,000 households
Airwave Coverage (Jilin Province)	96.0 %	97.5 %	95.6 %	99.2 %	99.4 %
No. of students (Jilin TV University)	31,148 students	38,000 students	(2012) 43,074 students	(2014) 55,082 students	

Source: Documents provided by JICA and the executing agency (Questionnaire response)

Note: More details of the number of Jilin TV University students are as follows:

2012 New admissions: 18,001; Current students: 43,074; Graduated students: 10,430

2014 New admissions: 15,832; Current students: 55,082; Graduated students: 15,432

The quantitative indicators other than the above operation and effect indicators demonstrate a series of effects (Table 7). Both JLTV and JLETV have attained the targeted on-air hours owing to the introduction of 24-hour broadcasting. Programs targeting women also reached the goal number by 2011. JLTV could add one channel instead of the planned two, owing to disapproval by an upper authority. Nonetheless, the number of broadcasting hours was expanded by 1.6 times against the hours at the appraisal, and by 1.2 times against the targeted hours. In this ex-post evaluation, the increase in the entire broadcasting volume was weighted more than the number of channels, which would be regarded as collateral.

JLTV also achieved an increase in the self-production of programs and programs advocating market rules by 2013, several years after the 2011 target. For sectors such as disaster prevention and the environment, the dissemination of information was strengthened and increased through frequent public commercials rather than through programs. An increase in the frequency and volume of public information to raise awareness among the audience was confirmed through an interview with the JLTV staff: a program called “Safe Perspectives” and public commercials in approximately 15 slots/day disseminated information on disaster prevention and preparedness. In addition, a program called “One World Geography” and other public commercials in approximately 15 slots/day widely advocated environmental issues.

JLETV achieved its targets in 2011 to strengthen programs on disaster prevention,

environmental protection, public sanitation, and market rules. The self-production of programs is also considered to be enhanced despite the decreased number in Table 7 below. The evaluation unit of self-production at the ex-post evaluation is different from that at the appraisal. The introduction of eight self-produced, year-round shows currently provides approximately 400 programs (8 shows × 52 weeks = 416 programs) produced by JLETV, which means a much larger volume of self-production than the 32 programs/year at the appraisal. The station is therefore assessed to have achieved the expected target of self-production. Programs for ethnic minorities are currently provided by a satellite channels in the Korean language that specifically target ethnic Koreans living in Yeonbyeon. These programs are a dominant source of daily information for them. Under the circumstances, JLTV does not produce daily programs for the ethnic minorities owing to a very low demand for such programs. Instead, the station has covered the topics of ethnic minorities and their regions in a serial drama, “My Home at the Foothills of Changbai Mountain,” which won a domestic award,<sup>8</sup> and in documentary programs such as “Changbai World,” “Changbai Mountain.” Additional documentary programs such as “Saman Culture” and “Songhua River,” which capture the Manchurian culture, were pending approval for airing at the ex-post evaluation.

The broadcasting of programs made in foreign countries including Japan has decreased significantly both at JLTV and JLETV because the State Administration of Radio, Film and Televisions at that time tightened the regulation on broadcasting hours of foreign programs. Thus, purchasing and broadcasting those programs became difficult. Under such circumstances, it is noteworthy and highly appreciated that the staff at JLETV made efforts and succeeded in putting the 30-minute program “Environment-Friendly Lifestyle: Make It a Habit” on the air 10 times. This program was coproduced by JLETV and NHK through the project.

The Chinese government also set forth a guideline to strengthen the functions of the national broadcasting station, namely China Central Television (CCTV), to produce and broadcast programs for children. Accordingly, JLETV currently does not handle programs for children.

Table 7: Other Quantitative Indicators for Operational Effects

Indicators		2003	2011	2009	2011	2013
		Baseline	Target (2 years after completion)	At completion	2 years after completion	Most recent available data
Self-produced programs	T	59/week	65/week	59/week	63/week	72/week
	ET	30/year	32/year	8/year	8/year	8/year
No. of channels	T	6	8	7	7	7
	ET	1	1	1	1	1
Broadcasting hours (per channel)	T	44,100 min./week	58,380 min./week	70,753 min./week	70,753 min./week	70,753 min./week
	ET	18 hours/day	20 hours/day	24 hours/day	24 hours/day	24 hours/day
Disaster-prev	T	0	1	0	0	1

<sup>8</sup> The domestic award “Five Masterpieces” recognizes excellent works produced by provinces, autonomous regions, and municipalities in the following five fields: theatrical play, TV drama, social science book, social science academic article, and movie.

ention/prepar edness programs (year)	ET	3	5	8	10	10
Environmental programs (year)	T	2	3	1	1	1
	ET	3	6	8	10	10
Public health programs (year)	T	3	4	3	3	3
	ET	6	7	10	12	12
Market-rules programs (year)	T	2	4	2	2	4
	ET	2	4	5	5	5
Foreign programs (year)	T	34	48	0	0	0
	ET	14	14	2	1	1
Japanese programs (year)	T	4	12	0	0	0
	ET	2	3	2	0	0
Programs for ethnic minorities (year)	T	2	3	2	2	2
	ET	0	1	0	0	0
Programs for women (year)	T	0	1	1	2	4
	ET	5	7	10	12	12
Programs for children (year)	T	1	3	—	—	3
	ET	4	5	—	—	—

T: JLTV, ET: JLETV

Source: Documents provided by JICA and the executing agency (Questionnaire response)

### 3.3.2 Qualitative Effects

#### (1) Jilin TV Station (JLTV)

Jilin TV Station has attained digitalization of core devices for shooting, recording, editing, broadcasting, and storing; and has established a networking system by utilizing the equipment and facilities installed in the project, which have improved broadcasting quality in various aspects such as production efficiency, production and broadcasting techniques, direction and staging methods, and workflow management. For example, broadcasting vans have enabled mobile live broadcasting, relaying on-the-spot signals to other stations such as CCTV, and expanding broadcasting styles. The three broadcasting vans have been operated frequently: one van for news reporting and another for production are operated a few times per day, and the van for data transmission is used 15 to 16 times a month. These vans also served at a number of sports and cultural events, including for live reporting of the 2008 Olympic torch relay, international conferences, expos, and exhibitions. The installed large studio,<sup>9</sup> which is the biggest studio in the station, has been operated at full capacity for two permanent programs and one or two ad hoc events and programs per month.<sup>10</sup> The medium

<sup>9</sup> The large studio of 1,500 m<sup>2</sup> is equipped with facilities introduced by the ODA loan such as a lighting system, sound system, audience seats, and shooting devices. The cameras and devices in the screening room and sound room are primarily Japanese products.

<sup>10</sup> It takes a week to replace a stage set; therefore, four rounds per month is regarded as full capacity.

and small studios have also been used every day for recording and live broadcasting. Training opportunities in Japan were utilized to the utmost to acquire production and broadcasting methods and skills necessary for the installed facilities and equipment.

The training opportunities also achieved a significant impact on participants in encountering and absorbing the philosophy of program production, management of broadcasting enterprises, and the passion and professionalism of the staff in Japanese broadcasting stations. Participants shared their comments and opinions at the field survey for the ex-post evaluation as follows: the passion and professionalism of Japanese colleagues who devoted 10 years to make a one-hour documentary was impressive and stimulating; touring highly efficient and functional studios as well as old-style studios that still used obsolete tape recording opened their eyes to the fact that the quality of a program depended not only on the technology but also on the ideas and thoughts that the producer poured into the production. The training was deemed to have contributed to motivating the participants to take action toward better broadcasting.

JLTV won the important award for domestic broadcasting—"The Golden Sail Award"—in 2009 for its standout achievements in TV technologies and program quality in combination. The award recognized the comprehensive enhancement of broadcasting capacity of the station in both tangible infrastructure (hardware) and intangible capability (software), as officially acknowledged by a third party.



Studio monitor room during on-air operations, JLTV



Nonlinear editing room, JLTV

## (2) Jilin Education TV Station (JLETV)

Jilin Education TV Station previously used old-style recording devices and linear editing equipment manufactured from the 1990s to 2000. As a result, the station produced plain and unimpressive programs that used simple recording techniques. The facilities of the station were greatly upgraded in quality and quantity through the project, which led to improvements in production efficiency, production and broadcasting techniques, direction and staging methods, workflow management, and so on. The broadcasting van, which replaced the originally planned studio system, has increased the mobility and efficiency of filming, recording, and editing and has diversified production methods. As a result, self-production at the station has significantly expanded.

The ceremony of the annual teachers' day on September 10 in the Jilin Province has been broadcast from the van for the past three years and was acknowledged by the Education Department of the Jilin Province. The van is mobilized 50 to 60 times per year (four to five times per month) on average to various sites in the province to produce such programs as "Disaster Prevention Exercise" and "Find the Model Teacher."

In addition to updating the facilities, the station also reviewed its production flow to standardize the work at each step, and improved operational procedures to increase its efficiency in program production. Some work in the production process that used to be outsourced is currently handled internally and self-reliantly by the staff because of the project. JLETV also had a chance to coproduce a program with NHK in addition to the training in Japan, through which the staff acquired advanced production techniques and were encouraged to produce and broadcast new content. The training is considered to have a positive impact on their production quality.

The station received "The National Teaching and Learning Award" in December 2014 for its program titled "On-Air Classroom," which aimed to train teachers in rural villages. The station also won first prize for the special theme in social education with the coproduced program "Environment-Friendly Lifestyle: Make It a Habit" with NHK. It is concluded that these programs were highly valued nationally for use at educational sites in rural villages where the quality and quantity of teachers was not sufficient, and also to raise awareness of environmental protection that is gathering attention across the country.



High-definition broadcasting van, JLETV



Program recording, JLETV

### (3) Jilin TV University (JLTVU)

Before the project, JLTVU had only obsolete cameras and a linear editor manufactured in the 1970s and 1980s, of which the only linear editor often broke down. The facilities and equipment were greatly advanced by the project. The renewal of the facilities has also enriched the capacity of the technical staff and made it possible to produce and provide diverse curricula, multimedia educational software, flow-media educational software, etc. The project has also diversified the program content and expanded the number of serviceable regions. For example, it became possible to connect local broadcasting universities across the province and broadcast educational skill contests of teachers at the universities on a live network. The installation of the new



recording studio has improved the quality of recording and filming, which also ensured better access for students to distance learning with strengthened quality and an improved educational environment. The improved curriculum and better conditions for distance learning led to the quantitative effect of increasing the students by 1.8 times. The number of learning centers located in ethnic minorities' neighbourhoods<sup>11</sup> has also been increased by 1.8 times, from 8,911 sites in 2003 to 15,930 sites in 2014.

The project has enabled the university to produce qualified programs by their own personnel, whereas the university used to purchase technical assistance from outside vendors to create curricula and educational software. As a result of this reduced outsourcing, the university has now been able to cut down on expenses.



Distance learning classroom, JLTUVU



Teaching skill contest of teachers, JLTUVU

### 3.4 Impacts

#### 3.4.1 Intended Impacts

##### (1) Educational Advancement, Knowledge, and Cultural Enrichment of the People

Interviews with the executing agency, and documents provided by them, reveal that the entire society has come to enjoy the benefits of material wealth, and that knowledge and the educational qualifications of the people have advanced. Accordingly, people have come to expect TV programs to be more entertaining as well as more informative, covering wider topics about society and daily life. Twenty to thirty years ago, the ordinary family had approximately five channels to watch; however, more than 100 channels are currently available owing to the introduction of the set-top box,<sup>12</sup> and the Internet further expands access to visual materials. Thus, today's audience has a vast number of options. Under such circumstances, the beneficiary survey<sup>13</sup> revealed that the audience in

<sup>11</sup> Yanbian, Tonghua, Baishan, Baicheng, Tongyu, Songyuan, Quian Gorlos, Daan, Fuyu, Changbai Mountain Administrative Committee are the areas where ethnic minorities reside.

<sup>12</sup> A set-top box is a device that converts signals from different broadcasting venues such as cable TV, satellite, ground-wave, and IP into an audible signal to broadcast on regular TV.

<sup>13</sup> The beneficiary survey was conducted in December 2014 at 10 locations in three cities, namely Changchun, Jilin, and Siping, by enumerators filling out a preset interview sheet. The number of valid responses was 42 in Changchun (male 20, female 22), 34 in Jilin (male 16, female 18), and 28 in Siping (male 14, female 14). The total number of respondents was 104 (male 50, female 54). The main contents of the interview dealt with the state of TV/radio watching and listening, evaluation of programs of JLTV and JLETV, and knowledge about and interest in foreign countries (the United States of America, Korea, and Japan) in relation to the TV programs.

Jilin Province expected JLTV and JLETV to sufficiently cover local news and topics at first and to present easy-to-follow programs next. In responding to these expectations, both stations have expanded their programs focusing on local-level social and cultural programs, including those about local traditional culture. These programs are deemed to have made a significant impact on the enrichment of education, knowledge, and culture in the province.

JLTV has increasingly an elder audience over 55 years old. Accordingly, JLTV has expanded its programming to enjoy and deepen an understanding of local traditional culture, reflecting the trend of the audience. This programming includes elaborate programs such as “Blossoms of Peach and Plum” that introduce traditional culture and acrobatic performances, and Jilin musicals and traditional comedies in northeast China such as “Two Zhuancong Mobilization.” The station also expanded its science education and cultural programs to meet the demand of its better-educated audience that is increasing in both urban and rural areas. Among these programs, the aforementioned shows focusing on ethnic minorities are included, such as the drama “My Home at the Foothills of Changbai Mountain,” and a documentary, “Saman Culture.” Practical and useful topics in daily life such as disaster preparedness and environmental protection are also covered in programs as “Safe Perspectives” as well as in public commercials that are aired more frequently. For example, disaster-related public commercials were broadcast 5,316 times in 2013, and environment-related commercials were aired 6,298 times in the same year.

According to the beneficiary survey, 90 respondents (87%) out of 104 reported that they watch JLTV, and 30% of them watch programs related to education, culture, and daily living almost every day, while 50% of the respondents watch these programs several times a week. The respondents rated the value of the JLTV programs<sup>14</sup> as follows, from the top: abundant local information (80%), easy-to-follow contents (53%), and sufficient number of programs on education, culture, and daily living (22%). Compared with the programs of 5 to 10 years ago, the top three remarkable improvements were rated as follows: more local information (62%), easier content (38%), and a greater variety of programs available (33%). A program frequently noted as very useful was a news program called “Catcher City,” with 25 respondents (approximately 30% of total respondents).

JLETV has contributed to enhancing the knowledge of citizens in Jilin Province by meeting the needs of educators, students, and their parents preparing for entrance exams, youth, and the rural population with a less-developed educational environment.<sup>15</sup> Programs focusing specifically on promoting education in rural areas have been produced in recent years; these programs include “Lectures by Famous Teachers” and “On-Air Classroom,” which are broadcast to the entire province through the cable network. These programs have contributed to upgrading the basic educational level in Jilin Province.

---

<sup>14</sup> The top three were selected from nine options.

<sup>15</sup> Educational programs are as follows: “Dialogue and Growth” to provide youth with opportunities to share their concerns and have counseling; “Interview with Professionals” to provide educators with hot issues in education policies and topics presented by education professionals; “Talk About the World” to report interesting domestic news; “Our Show Time” to introduce university life, culture, and artwork of university students, coproduced with university students with occasional campus events; “Guide to University Entrance” to provide guidance to students who are taking entrance exams and their parents.

At JLTUVU, the number of students registered in formal education courses as law, business administration, and public administration have increased by 1.8 times. Nonformal adult education courses have also been expanded, from 10 to 13 courses. Moreover, JLTUVU has also set up new vocational courses to issue certificates, and a preparatory course for prospective social workers funded by the department of civil affairs of Jilin Province. The number of students attending nonformal education courses has increased by 2.5 times, as shown in Table 8. The project has brought a tangible impact to JLTUVU that contributes to the rise in the educational level of the Jilin constituencies.

Table 8: Main Courses and Number of Students at JLTUVU

	2003 (at appraisal)	2012 (at completion)	2014 (2 years after completion)
<b>Formal Education Courses</b>			
No. of courses	386	476	532
No. of students	31,148	43,074	55,082
Top 3 popular courses	Law (constitutional law, jurisprudence, criminal procedural law)	Business administration (finance, basic and advanced computer skills, statistics)	Public Administration (public administration, office management, basic management)
<b>Nonformal Education Courses (Adult Education)</b>			
No. of courses	10	12	13
No. of students	10,000	20,000	25,000
Top 3 popular courses	Electrical engineering, welding, hazardous chemicals	Electrical engineering, welding, hazardous chemicals	Electrical engineering, welding, hazardous chemicals

Source: Documents provided by the executing agency (Questionnaire response)

## (2) Collaboration Between Japanese and Chinese Broadcasting Stations

JLTV had signed the Friendly Cooperation Agreement between Tohoku Broadcasting of Japan for five years from 2012. The exchange of missions for mutual visits has already started; this marks the beginning of collaboration between the two stations based on the Agreement. Despite the regulations of the State Administration of Press, Publication, Radio, Film and Television on collaboration and coproduction with foreign broadcasting stations including Japanese stations, there has been consistent expectation for cooperation if allowed, with Japanese broadcasting stations, from the appraisal to the ex-post evaluation.

## (3) Deepening Mutual Understanding Between Japan and China

JLTV broadcast a program called “Northeast Asia” and introduced Japanese culture and trends, which facilitated the audience’s interest in and concerns particularly about healthy lifestyle and food culture in Japan. In entertainment, Japanese movie stars such as Momoe Yamaguchi and Ken Takakura are reportedly quite popular and respected among the Chinese audience. Moreover, Jilin Province has been a friendship province of Miyagi Prefecture, and after the Great East Japan Earthquake, the leaders of Jilin Province visited to express their condolences to the

Consulate-General of Japan in Shenyang as well as the disaster-affected areas. This was broadcast several times on the news programs at that time. In addition, the coproduced program between JLETV and NHK won “the First Prize for Special Theme in Social Education” by the Ministry of Education. This is regarded as a positive impact on mutual understanding between the two nations to some extent.

The beneficiary survey revealed that TV viewers in their 20s, 30s, and 40s were interested in Japanese culture such as music, drama, and movies. A satellite channel of the JLETV broadcast special programs featuring Japanese major stars; this had perhaps some influence on the audience in encountering Japanese entertainment. However, it is difficult to estimate how far the programs contributed to generating a positive impression of Japan and to promote mutual understanding between Japan and China. Forty percent of the respondents in the beneficiary survey indicated that their impressions of Japan got better or slightly better.

The beneficiary survey also revealed that television (among other means such as the internet, radio, and newspapers<sup>16</sup>) was the most used means in Jilin Province to obtain information about foreign countries including Japan. From this result, the project is assessed effective to have focused on television broadcasting rather than other media.

Box: Coproduced Program “Environment-Friendly Lifestyle: Make It a Habit”

JLETV dispatched a crew of four production and editing staff to Japan for two weeks to cover waste management systems in Japan and to make a program titled “Environment-Friendly Lifestyle: Make It a Habit.” The 30-minute program introduces the flow of waste management from the household to a final landfill: garbage sorting and recycling in the household, collection and transportation by the local municipality, incineration of burnable waste and heat utilization generated in the process, collection of reusable iron and aluminium during the processing of incombustible waste, and the final landfill. The program contains interviews with citizens, officers of the municipality, the Ministry of the Environment, and a private waste management company. The program emphasizes the importance of coordinated actions among government, business, and households for waste reduction and environmental protection.

The crewmembers recalled their surprise when they saw no waste scattering. This occurred not only in houses but also on tiny pathways and in public places, where cleaners wearing spotless uniforms collected waste. The core message put into the program was that an environment-friendly lifestyle started with the small practices of individuals in daily life to try to reduce waste and recycle it as much as possible, and that this environmental awareness should be taught from childhood to make these small practices a habit. The program also demonstrates a powerful message through visual content, provided by NHK, of environmental pollution and its impact on the human body, such as the *Minamata* diseases experienced by Japanese during the period of

<sup>16</sup> Asked about the main source of obtaining information about foreign countries, exemplified by the United States, Korea, and Japan, 62% of the total respondents chose television, 39% chose the Internet, and 37% chose newspapers/magazines (with multiple answers). This indicated the advantage of television as a media to promote understanding of foreign countries.

<p>rapid economic growth. Visual presentations that compared the situation before and after the introduction of environmental protection policies made the message more convincing.</p>
---

### 3.4.2 Other Impacts

Another positive impact of the project is a dramatic increase in advertising revenue: JLTV increased its revenue by 4.9 times, and JLETV by 5.4 times. JLTV gradually expanded its channels from five in 2002 to six in 2003 and then to seven in 2007. It also realized 24-hour broadcasting in 2008 and extended its broadcasting hours by 1.6 times, which quadrupled the advertising hours. JLETV has still run one channel, but has also increased advertising hours owing to the introduction of 24-hour broadcasting. Moreover, improvement in program quality by the project has increased the value of advertising, which attracts more clients. Consequently, advertising revenues have increased.

There have been no negative impacts on the natural environment, and no resettlement occurred throughout the project.

This project has largely achieved its objectives. Therefore, effectiveness and impact of the project are high.

## 3.5 Sustainability (Rating: ③)

### 3.5.1 Institutional Aspects of Operation and Maintenance

JLTV, JLETV, and JLTUVU have consolidated their institutional framework for operation and maintenance, in which respective technical departments in charge of maintenance of equipment and facilities operate in close coordination with production units (Table 9).

Table 9: Operation and Maintenance Structure of the JLTV, JLETV, and JLTUVU

JLTV	Under the supervision of the Administration of Press, Publication, Radio, Film and Television of Jilin Province, JLTV is in charge of facilities and equipment. JLTV has 875 staff, of which 17 are assigned to the technical department and play a key role in maintenance with technical staff assigned to departments operating the devices; namely the production department, broadcasting department, and network control department.
JLETV	Under the supervision of the Education Department of Jilin Province, JLETV is responsible for facilities and equipment. Eight staff of its technical production department, out of 128 total staff, take the lead in operation and maintenance with the staff in the chief editor's room, program center, broadcasting department, new media department, etc.
JLTUVU	Under the supervision of the Education Department of Jilin Province, JLTUVU is responsible for facilities and equipment. JLTUVU has 160 staff, both teaching and administration personnel, and has established a new center for distance-learning

	<p>technology along with the project, in which 17 staff play a key role in operation and maintenance in collaboration with the teaching department. In the center, four officers of the network administration unit and two chief technical officers operate and maintain the IT system, and provide support to the local broadcasting universities over the province. Five staff in the TV production unit are responsible for the maintenance of broadcasting equipment.</p>
--	--

Source: Documents provided by the executing agency (Questionnaire response)

3.5.2 Technical Aspects of Operation and Maintenance

Technical personnel have been assigned to relevant sections for technical support, production, broadcasting, and so on at JLTU, JLETV, and JLTUVU for operation and maintenance. JLETV and JLTUVU have on some occasions received support from manufacturers depending on the malfunctioning conditions, after their own technical personnel assessed whether external support is necessary. Moreover, JLTU, JLETV, and JLTUVU all have regulations and manuals on operation and maintenance that are referred to widely during routine operation and used during training sessions. In short, technical sustainability is sufficiently ensured for all entities for operation and maintenance.

3.5.3 Financial Aspects of Operation and Maintenance

Income and expenditures have been greatly expanded at JLTU, JLETV, and JLTUVU compared with those at appraisal (Tables 10–12). With regard to income, JLTU and JLETV have substantially increased their advertising revenue. JLTUVU, which has no advertising revenue, also has increased governmental subsidy and tuition revenue.

JLTU and JLETV have already set their sights on the 13<sup>th</sup> Five-Year Plan (2016–2020) and the realization of high-definition technology at all steps of producing and broadcasting, and have started investing in equipment for upgrades with their own budgets. JLTUVU also plans to update the facilities at its new campus. For this purpose, expenditures at JLTU and JLTUVU exceeded their incomes in 2013; thus, their balances ended in deficits. Nonetheless, the deficits are confirmed to be unproblematic for financial stability and the loan repayment plan because the deficits were for a temporary period to update equipment to catch up with advances in technology. Maintenance costs and personnel costs have also been ensured, and financial sustainability is secure.

Table 10: Financial Revenue and Expenditures of JLTV

(Unit: million yuan)

Item	2002	2009	2010	2011	2012	2013
Total annual revenue	16,114	56,111	63,924	72,102	78,191	79,337
Advertising revenue	16,106	55,739	63,393	71,800	77,800	79,000
Other Business revenue	0	0	0	0	0	0
Government subsidy	0	0	0	0	0	0
Other revenue	8	372	531	302	391	337
Total annual expenditures	13,939	49,135	61,739	59,027	72,582	93,056
Personnel expenses	2,015	5,967	6,251	6,494	7,147	11,089
General overhead	2,045	3,475	3,526	3,908	3,977	4,374
(Incl. maintenance cost)	N/A	N/A	N/A	N/A	N/A	N/A
Program production cost	0	10,883	11,616	13,622	16,072	16,367
Program purchase cost	0	11,026	12,697	12,694	17,437	21,813
Capital investment	2,000	1,909	2,700	1,446	1,953	8,551
Satellite lease cost	270	479	325	341	538	369
Networking cost	0	6,502	8,865	9,510	10,563	9,940
Interest on borrowing	0	1,961	4,281	5,083	5,795	5,993
Maintenance cost	449	748	1,394	673	448	387
Other expenditures	7,160	6,185	10,084	5,256	8,652	14,173

Source: Documents provided by the executing agency (Questionnaire response)

Table 11: Financial Revenue and Expenditures of JLETV

(Unit: million yuan)

Item	2002	2009	2010	2011	2012	2013
Total annual revenue	780	2,300	1,537	1,340	2,050	2,372
Advertising revenue	360	1,666	1,383	925	1,740	1,973
Program production revenue	250	0	0	0	0	0
Other business revenue	170	0	0	0	0	0
Government subsidy	0	634	153	411	310	397
Other revenue	0	0	1	4	0	2
Total annual expenditure	610	1,936	2,002	1,721	1,656	2,240
Personnel expenses	80	566	527	483	649	758
General overhead	110	314	295	225	223	204
(Incl. maintenance cost)	0	17	9	18	12	0
Program production cost	80	613	610	611	425	665
Program purchase cost	150	264	173	124	134	416
Capital investment	120	60	299	215	86	74
Other expenditures	70	119	99	63	139	123

Source: Documents provided by the executing agency (Questionnaire response)

Table 12: Financial Revenue and Expenditures of JLTUVU

(Unit: million yuan)

Item	2002	2009	2010	2011	2012	2013
Total annual revenue	1,365	4,720	7,242	7,595	9,189	6,609
Advertising revenue	0	0	0	0	0	0
Other Business revenue	0	0	0	0	0	0
Government subsidy	678	2,814	5,292	5,435	7,089	3,864
Tuition revenue	680	1,850	1,900	2,100	2,000	2,600
Other revenue	7	56	50	60	100	145
Total annual expenditures	1,366	4,895	7,200	5,598	6,252	10,322
Personnel expenses	577	1,198	1,295	1,394	1,723	1,871
General overhead	647	1,957	1,945	2,003	1,732	1,871
(Incl. maintenance cost)	65	48	69	53	16	268
Training expenditure	0	1	3	12	4	7
Research expenditure	0	0	0	1	2	3
Capital investment	135	27	129	100	86	640
Other expenditures	7	1,712	3,828	2,088	2,705	6,189

Source: Documents provided by the executing agency (Questionnaire response)

#### 3.5.4 Current Status of Operation and Maintenance

Technical stability is ensured at all implementing agencies, where operation and maintenance have been carried out in a systematized manner with standardized manuals and regular checkups by their own and by manufacturers on demand. No operational inconveniences or maintenance troubles have been reported.

Among the installed equipment, there are currently some items, particularly IT devices, that have frequent breakdowns and cannot be well maintained owing to their lifetimes ending/ended, as well as the unavailability of spare parts in the end of life. The entities have already taken appropriate measures for such issues as renewing and replacing equipment using their own budget.

Consequently, the project is assessed to have no problems with operation and maintenance.

As reviewed above, no problems have been observed in the institutional, technical and financial aspects of the operation and maintenance system. Therefore sustainability of the project effects is high.

## 4. Conclusion, Lessons Learned and Recommendations

### 4.1 Conclusion

The goal of this project was to improve the broadcasting programs of Jilin Province both in quantity and quality in order to enhance levels of education, knowledge, and culture of the citizens and to deepen mutual understanding between Japan and China, by supporting innovations in equipment and providing training opportunities to the Jilin TV Station, Jilin Education TV Station, and Jilin TV University. The project was in line with China's development policies and needs as well as Japan's ODA policy; therefore, the project is relevant. The project was completed within the planned budget and the planned period; thus, its efficiency is high. The upgrading of broadcasting equipment (hardware) and skills (software) appears to have contributed considerably to increasing the levels of



education, knowledge, and culture of the citizens. The degree of the project's impact on promoting mutual understanding between ordinary citizens of Japan and China could not be precisely assessed because the overall number of foreign programs in broadcasting has been decreasing, including programs with Japanese contents. Nonetheless, training in Japan and coproduction opportunities facilitated the collaboration between Japanese and Chinese broadcasting stations, and the broadcast coproduced program as well as the contents that introduced Japanese culture and entertainment seem to have promoted a mutual understanding of the two nations to some extent. The effectiveness and the impact of the project are therefore high. Institutional, technical, and financial sustainability is excellent and ensured the sustainable impact of the project.

In light of the above, this project is evaluated to be highly satisfactory.

## 4.2 Recommendations

### 4.2.1 Recommendations to the Executing Agency

- (1) To further strengthen the mutual cooperation between Japanese and Chinese broadcasting stations, JLTV is advised to take the initiative for more dialogue with Tohoku Broadcasting of Japan to expand personnel exchanges and to explore possible coproductions based on the friendship agreement.
- (2) The coproduced program with JLETV and NHK "Environment-Friendly Lifestyle: Make It a Habit" can be used as an effective method for environmental education and advocacy in the growing national awareness and attention on environmental issues. The program was broadcast approximately 10 times in 2009. Environmental protection is a prioritized theme also for JICA and its assistance in China, and several JICA projects have been implemented that focused on the environment. JLETV is therefore advised to coordinate with the JICA China office for opportunities to utilize the program in JICA's environmental projects as well as any other occasions and events to promote collaboration between Japan and China.

### 4.2.2 Recommendations to JICA

- (1) JICA is suggested to explore opportunities to use the JLETV program "Environment-Friendly Lifestyle: Make It a Habit" in ongoing environment-related JICA projects, the Sino-Japan Friendship Centre for Environmental Protection, and grassroots events to expand the output and assets of this project.

## 4.3 Lessons Learned

- (1) Clarification of the roles of several entities involved in procurement of facilities and equipment

The project was for three different entities (JLTV, JLETV, and JLTUVU) to procure facilities and equipment. Among the entities, JLTV in particular had various devices to be used for many purposes in different departments under different administrators such as facilities for the building, studio devices, and production equipment. Procurement packages had been arranged in a way to

clarify the administrators of the equipment/facilities and had also been rearranged flexibly with some replacements of the items to accommodate the progress of the building construction during the project. Moreover, the Administration of Press, Publication, Radio, Film and Television of Jilin Province took a strong leadership role in supervising the entire procurement process including the rearrangement of the packages. Because of these factors, the project probably has completed its procurement and other planned activities within the planned project duration. When a project involves several independent entities in the procurement, it is suggested that the roles and responsibilities of the different entities be clarified in advance and that the procurement packages be arranged in line with the entities and pre-decided clarification of the roles and responsibilities.

(2) Necessity to assign appropriate number of interpreters with knowledge of technical terms for training in Japan

During a group interview with the participants of the training in Japan, the assignment of interpreters with more knowledge of technical terms, and more interpreters in light of the number of participants, were proposed for better learning of technical skills for a future project. In the training for acquiring specialized knowledge and skills, particularly on advanced technology, interpreters are key to ensure that training is effective through sufficient explanation of the skills; therefore, it is suggested to pay significant attention to appointing interpreters with sufficient vocabulary, and in appropriate numbers.

Comparison of the Original and Actual Scope of the Project

Item	Plan	Actual
<p>1. Project Outputs (Hard component)</p>	<p>&lt; Jilin TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ Facilities of Broadcasting center (studio renovation, elevators, air conditioners, etc.)</li> <li>▪ Studio equipment (digital cameras, recorders, editors, monitors, etc.)</li> <li>▪ Broadcasting Van</li> <li>▪ Construction of broadcasting center (ODA loan not applied) (Total 6 packages)</li> </ul> <p>&lt; Jilin Education TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ Studio equipment (digital cameras, recorders, editors, nonlinear editing system, etc.) (Total 1 package)</li> </ul> <p>&lt;Jilin TV University&gt;</p> <ul style="list-style-type: none"> <li>▪ Studio equipment (virtual channel studio system, high-definition television cameras and recorders, digital captioning system, etc.)</li> <li>▪ Construction of the university building (ODA loan not applied) (Total 1 package)</li> </ul>	<p>&lt; Jilin TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ TV transmitting equipment</li> <li>▪ Facilities of Broadcasting center (studio lighting, elevators, air conditioners, uninterruptible power system, etc.)</li> <li>▪ Studio system and digital TV broadcasting system (digital cameras, recorders, editors, monitors, etc.)</li> <li>▪ <u>Digital radio recording and transmitting system*</u></li> <li>▪ <u>Media resource control system (added)</u></li> <li>▪ Broadcasting Van</li> <li>▪ Construction of broadcasting center (ODA loan not applied) (Total 8 packages)</li> </ul> <p>&lt; Jilin Education TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ Studio equipment (digital cameras and editors)</li> <li>▪ <u>Broadcasting van with digital system (Replacement of studio system)</u></li> <li>▪ Nonlinear editing system. (Total 1 package)</li> </ul> <p>&lt;Jilin TV University&gt;</p> <ul style="list-style-type: none"> <li>▪ Studio equipment (high-definition television cameras and recorders, digital captioning system, digital audio workstation, lighting devices, etc.)</li> <li>▪ <u>IT system (computer server, network devices, video conference system, etc.) *virtual channel studio system was canceled</u></li> <li>▪ Nonlinear editing systems for high definition and networks.</li> <li>▪ <u>Office and classroom facilities (added)</u></li> <li>▪ Construction of the university building (yen loan not applied) (Total 1 package)</li> </ul>
<p>(Soft component)</p>	<p>&lt; Jilin TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ Training for program producing, editing, and broadcasting (3 months × 11 persons)</li> <li>▪ Purchasing of broadcasting rights for Japanese content</li> <li>▪ Coproduction with Japanese</li> </ul>	<p>&lt; Jilin TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ Training and discussions on program producing and editing, high-definition TV technology and media control (1 week × 40 persons, )</li> <li>▪ No purchase of broadcasting rights</li> </ul>

	<p>broadcasting stations</p> <p>&lt;Jilin Education TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ Training for program producing, editing, and broadcasting (3 months × 2 persons)</li> <li>▪ Obtaining content from the National Institute of Multimedia Education (NIME-WORLD) under Japan's Ministry of Education, Culture, Sports, Science and Technology</li> </ul> <p>&lt;Jilin TV University&gt;</p> <ul style="list-style-type: none"> <li>▪ Training for program producing, editing, and broadcasting (3 months × 2 persons)</li> <li>▪ Collaboration with the Open University of Japan</li> </ul>	<ul style="list-style-type: none"> <li>▪ No coproduction</li> </ul> <p>&lt;Jilin Education TV Station&gt;</p> <ul style="list-style-type: none"> <li>▪ Training for program producing, editing, and broadcasting (approx. 1 week × 3 persons)</li> <li>▪ Coproduction of a program (4 production crew visited for filming and produced a 30-minute program titled "Environment-Friendly Lifestyle: Make It a Habit" with the support of NHK)</li> <li>▪ No programs obtained from NIME-WORLD</li> </ul> <p>&lt;Jilin TV University&gt;</p> <ul style="list-style-type: none"> <li>▪ Training for program producing, editing, and broadcasting (approx. 1 week × 2 persons, in 2008)</li> <li>▪ No collaboration with the Open University of Japan</li> </ul>
(Consulting Service)	<p>(a) Technical support in procurement</p> <ol style="list-style-type: none"> <li>① Preparation of detailed design (D/D) and pre-qualification (P/Q) documents</li> <li>② Evaluation of P/Q results</li> <li>③ Preparation of tender documents</li> <li>④ Evaluation of tender results</li> </ol> <p>(b) Technical support in training and others</p> <ol style="list-style-type: none"> <li>① Training in Japan</li> <li>② Coproduction of programs with Japanese broadcasting stations</li> <li>③ Purchase of Japanese programs and broadcasting rights</li> </ol>	<p>(a) Technical support in procurement</p> <ol style="list-style-type: none"> <li>① Preparation of detailed design (D/D) and pre-qualification (P/Q) documents</li> <li>② Evaluation of P/Q results</li> <li>③ Preparation of tender documents</li> </ol> <p>(b) Technical support in training and others</p> <ol style="list-style-type: none"> <li>① Training in Japan</li> <li>② Coproduction of programs with a Japanese broadcasting station</li> </ol>
2. Project Period	March 2004–December 2009 (70 months)	As planned
3. Project Cost		
Amount paid in Foreign currency	4,375 million yen	4,328 million yen
Amount paid in Local currency	988 million yen (69 million RMB)	762 million yen (56 million RMB)
Total	5,363million yen	5,090million yen

Japanese ODA loan portion	4,375 million yen	4,328 million yen
Exchange rate	1 RMB = 14.3 yen (As of September 2003)	1 RMB = 13.7 yen (Average between 2004 and 2012)