

People's Republic of China

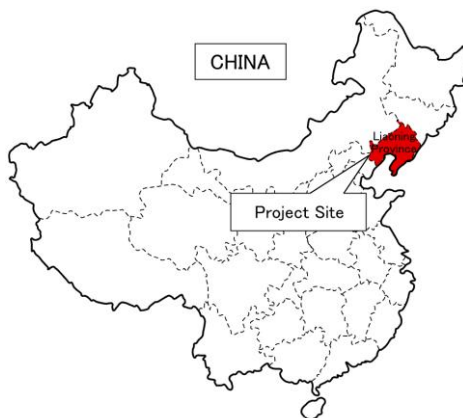
Ex-Post Evaluation of Japanese ODA Loan Project “Liaoning Television and Radio Infrastructure Improvement Project”

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0. Summary

The objective of this project was to upgrade the programme making equipment and systems and to improve the programme transmission systems for television and radio broadcasters in Liaoning province, thereby improving the quality and quantity of independently produced programmes and facilitating the inter-city transmission of information in the province. As this objective of the project matched the development policies of the country and province at the time of both appraisal and ex-post evaluation, the relevance of the project was high. While the intended outputs have generally been achieved as planned, the lengthy extension of the project period has made the project efficiency fair. The introduction of the latest equipment and subsequent effective use of such equipment have led to a noticeable improvement in the quality and quantity of independently produced programmes as well as information provided in the province. The newly broadcast programmes and information have not only had a significant impact on the lives of the audience in the province but have also had the effect of making enterprises aware of and use television and radio broadcasting as very important advertising media. As such, the project has achieved a high level of effectiveness. No problems have been observed in terms of the structural, technical and financial aspects of the project, illustrating its high level of sustainability. In light of the above, this project is evaluated to be highly satisfactory.

1. Project Description



Project Location



New Equipments Provided
Under the Project

1.1 Background

TV broadcasting services in China have taken great strides forward nationwide following the introduction of the policy of reform and opening doors in 1979 to the point that more than 90% of households owned a television set by 2001, illustrating the progress made in terms of service coverage and the development of broadcasters from the technical and other aspects. However, there are areas which are unable to receive disaster information as well as political, economic and social information in a timely manner due to insufficient broadcasting equipment and systems. This situation demands both the production of programmes which meet the needs of viewers and a reliable information service.

In Liaoning Province, i.e. the target region of the project, the Liaoning Broadcasting and Television Bureau (at the time of project implementation) has considerable influence in the region with three television channels and five radio channels. However, as its programme production technologies were not only insufficient but also out-dated, the quality of its programmes had room for improvement. Moreover, given the fact that the link between the regional broadcasting stations operated by the Bureau was insufficient, there was a pressing need for information sharing through the development of a network to allow regional broadcasters to efficiently and effectively use the programmes and other useful information possessed by individual broadcasters.

1.2 Project Outline

The objectives of the project were (1) to improve both the quality and quantity of independently produced programmes and (2) to facilitate the inter-city transmission of information by upgrading the programme making equipment of television broadcasters (Liaoning Television (LTV) and Liaoning Educational Television (LETV)), rebuilding the deteriorated radio station building, upgrading the programme making equipment of Radio Liaoning (RL) and improving the programme transmission systems, thereby contributing to (1) increased use of various types of information by local people, (2) improvement of the education standard in remote areas through the broadcasting of educational programmes, (3) rectification of the information gap through the strengthening of information access in deep inland areas and (4) improvement of the cultural (and economic) standard of local people.

Loan Approved Amount/Disbursed Amount	3,210 million JPY/3,205 million JPY
Exchange of Notes Date/Loan Agreement Signing Date	March, 2001/March, 2001
Terms and Conditions	Interest rate: 1.8%/year Repayment period: 30 years (Grace period: 10 years) Procurement conditions: general untied
Borrower/Executing Agency	Government of the People's Republic of China/Liaoning Provincial Administration of Radio, Film and Television (LPARFT)
Final Disbursement Date	July, 2008
Main Contractor (over 1 billion JPY)	None
Main Consultant (over 100 million JPY)	None
Feasibility Studies, etc.	Feasibility Study for the Liaoning Television and Radio

	<p>Infrastructure Improvement Project: Completed in May, 1999 International Engineering Consulting Corporation (approved by the Liaoning Planning Bureau in September, 1999)</p> <p>Contents: Implementation of the Liaoning Television and Radio Infrastructure Improvement Project to improve the quality and quantity of regional broadcasting to contribute to the socioeconomic development of the region. Total investment amount of RMB 543 million (RMB 40 million by the regional government and 40 million yen Japanese loan).</p> <p>Environmental Impact Assessment for the Liaoning Television and Radio Infrastructure Improvement Project: Completed in June, 2000 by the Liaoning Research Institute of Environmental Protection (approved by the Liaoning Environmental Protection Bureau in July, 2000)</p>
Related Projects	None

2. Outline of the Evaluation Study

2.1 External Evaluator

Toshihiro Nishino, International Development Center of Japan Inc.

2.2 Duration of Evaluation Study

Duration of the study : December, 2010 ~ November, 2011

Duration of the field study : 3 ~ 19 March, 2011, 12 ~ 18 June, 2011

2.3 Constraints during the Evaluation Study

No special constraints were found for the implementation of the Study.

3. Results of the Evaluation (Overall Rating: A¹)

3.1 Relevance (Rating: ③²)

3.1.1 Relevance with Development Plans of China

(1) Development Plans at the Time of Appraisal

The 10th Five Year Plan (2001 ~ 2005) of the State Administration of Radio, Film and Television emphasised improvement of the capacity to produce contents, increase of the ratio of the population receiving broadcasting services, increase of the number of subscribers to cable television, enhancement of the transmission network and promotion of digitalisation.

Meanwhile, the 9th Five Year Plan (1996 ~ 2000) of Liaoning Province considered the securing of a means of producing information of a highly public nature, which is essential for the daily lives of local residents, while trying to rectify the information gap to be an important task. The following 10th Five Year Plan (2001 ~ 2005) identified the improvement of

¹ A: Highly Satisfactory; B: Satisfactory; C: Partially Satisfactory; D: Unsatisfactory

² ③: High; ②: Fair; ①: Low

equipment to locally produce high quality programmes and the development of a network of trunk broadcasting transmission lines as priority tasks. The subject project of the present evaluation was designated an important provincial project under this 10th Five Year Plan.

(2) Development Plans at the Time of Ex-Post Evaluation

The 11th Five Year Plan (2006 ~ 2010) of the State Administration of Radio, Film and Television emphasised such issues as acceleration of technological innovation in television and radio broadcasting, expansion of the service areas (geographical coverage), improvement of the reliability of broadcasting, and establishment of a system to distribute/exchange contents to achieve high quality, high efficiency broadcasting.

Meanwhile, the 11th Five Year Plan (2006 ~ 2010) of Liaoning Province maintained the policy of promoting the development of information infrastructure in new areas, capitalising on the past achievements. Provincial assistance for television and radio broadcasters continued or was even strengthened from the viewpoint of widely disseminating the social development results to the public and the viewpoint of strengthening the preparedness as well as capacity to respond to various disasters in order to contain damage. At present, the details of the 12th Five Year Plan (2011 ~ 2015) are still in preparation but the basic policies are expected to be maintained according to the Liaoning Provincial Administration of Radio, Film and Television.

3.1.2 Relevance with Development Needs of China

(1) Importance of Television and Radio Broadcasting as Sources of Information

China has been witnessing the expansion of information sources in terms of both coverage and numbers with a steady increase of the total number of television and radio broadcasting hours in Liaoning Province as in the case of the rest of China.

Table 1 Number of Television and Radio Broadcasting Hours in China and Liaoning Province (2009)

	Nationwide		Liaoning Province	
	Television	Radio	Television	Radio
Broadcasting Hours	15.777 million hours	12.266 million hours	670,000 hours	699,000 hours
Year-on-Year	+ 5.5%	+ 5.5%	+ 0.5%	+ 2.8%

Source: 2009 Report on Development of China's Radio, Film and Television

The user survey³ conducted as part of the study found that television and radio rank first and second on the list of media and information sources frequently used in daily life and their usage is increasing, confirming the importance of these two types of media even when compared to new information sources, including the Internet.

³ This user survey was conducted by the evaluator with 100 television viewers in Liaoning Province.

Table 2 Usage of Information Sources

Category	Television	Radio	Internet
Frequently Used	99% (1 st)	83% (2 nd)	60% (3 rd)
Mostly Used	45% (1 st)	18% (3 rd)	32% (2 nd)
Increasingly Used	94% (1 st)	68% (2 nd)	49% (3 rd)

Source: User survey conducted by the evaluator.

The size of the television and radio advertising market has been rapidly growing in China as well as Liaoning Province, indicating the growing need for television and radio advertisements from the viewpoint of promoting the national and local economy and industries.

Table 3 Television and Radio Advertising Market in China and Liaoning Province

	Nationwide		Liaoning Province	
	Television	Radio	Television	Radio
Advertising Revenue	67,580 million RMB	8,140 million RMB	1,710 million RMB	510 million RMB
Year-on-Year	+ 10.9%	+ 12.8%	+ 9.5%	+ 12.2%

Source: 2010 China Radio and TV Yearbook

(2) Necessity for the Project

At the time of appraisal (2001), the available programme making equipment and systems were not only insufficient but were also out-dated at LTV, RL and LETV, all of which consequently suffered from a poor programme making capacity. As it was difficult for these broadcasters to make their own programmes to meet the needs of the local audience, the replacement of equipment and systems with more advanced equipment and systems was an urgent priority. Another pressing issue along with the qualitative and quantitative improvement of the programmes was the development of a programme distribution network in view of the fact that only approximately 50% (excluding those connected to the cable television network of each local station) of the provincial population could receive high quality broadcasting for all free terrestrial television channels.

Upgrading of the programme making equipment and systems and the development of socioeconomic infrastructure to contribute to the independent economic development of the province were highly relevant with the development needs of the province. In consideration of the strong need for television and radio broadcasting services, the renewal and expansion of broadcasting equipment and systems and of the distribution network continue to be very important today.

3.1.3 Relevance with Japan's ODA Policy

Japan's Medium-Term Strategy for Overseas Economic Cooperation Operations (JBIC) has identified the development of social and economic infrastructure contributing to the process of self-help economic development as one of the priority areas for cooperation. The country-specific ODA policy indicates the preferred assistance for both the hardware and software aspects of the IT revolution in the communication sector. Meanwhile, the IT Charter adopted at the Kyushu-Okinawa Summit in July, 2000 selected "the building of ICTs infrastructure and the provision of assistance for network establishment" and "promotion of the use of ICTs in development assistance" from Japan's Comprehensive Cooperation Package to Address the International Digital Divide as the main targets.

As the upgrading of equipment, etc. under the project played a vital role in fulfilling these policies, the relevance of the project with the aid policies at the time of appraisal is very high.⁴

Through the implementation of the project, the very high reliability of Japanese equipment and technologies in the broadcasting sector was illustrated by the fact that the project executing agency requested the procurement of equipment from specific Japanese manufacturers. The project was, therefore, highly relevant with Japan's ODA policy from the viewpoint of utilising the unique technologies developed by Japanese companies.

The project has been highly relevant with China's own development plan, development needs as well as Japan's ODA policy; therefore its relevance is high.

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

The project aimed at improving the broadcasting equipment and system for local television and radio broadcasters and the network of trunk broadcasting transmission lines and its main outputs are described below.

- LTV: (1) outdoor broadcasting van system; (2) outdoor satellite van system; (3) digital video camera system; (4) editing equipment
- LETV: (1) digital video camera system; (2) editing equipment
- RL: (1) outdoor broadcasting van system and outdoor audio recording van system; (2) editing equipment; (3) construction materials
- LRTTBC (Liaoning Radio and TV Transmission and Broadcasting Center): (1) digital transmission system; (2) optical fibres

Compared to the original plan, several changes were made as listed in Table 4. The principal changes were (1) the addition of equipment for broadcasting transmission network improvement due to a policy change and (2) the change of equipment to be procured due to the progress of technological innovation. These changes were accepted and implemented after thorough discussions between the executing agency and the JICA.

⁴ There were some differences with the priority areas of the recommendation put forward by the Forum for Desirable Economic Cooperation for China Towards the 21st Century (basis for the Economic Cooperation Programme for China formulated in October, 2001) in May, 2000. The identified areas are assistance for reform and door-opening (integration to the world economy and strengthening of governance), assistance for the solving of global issues (environmental and other issues), promotion of mutual understanding, eradication of poverty, assistance for private sector initiatives and assistance for multilateral cooperation).

Table 4 Original Plan for Outputs and Subsequent Changes

Project Target	Original Plan	Changes	Reason for Changes
LTV (Production Equipment)	<ol style="list-style-type: none"> 1) Outdoor broadcasting van system 2) Outdoor satellite van system 3) Digital video camera system (for use in the new studio) 4) Editing equipment 5) Others (measuring instruments, etc.) 	<p>Equipment onboard vans (2003)</p> <p>Changes of the technical specifications, etc. for cameras and cancellation/addition of some equipment</p>	<p>It was necessary to change the equipment to match the objectives of the project due to the need to clarify the technical specifications of the equipment for tender following requests by prospective bidders and the changing needs with the passing of time.</p>
LETV	<ol style="list-style-type: none"> 1) Digital video camera system (for use in the new studio) 2) Editing equipment 3) Others (measuring instruments, etc.) 	No changes	
RL (Production Equipment; Construction Materials)	<ol style="list-style-type: none"> 1) Outdoor broadcasting van system and outdoor audio recording van system 2) Editing equipment 3) Construction materials (the civil engineering work for the construction of the RL building was paid by the Chinese side) 	<p>There were no changes to the systems and equipment to be procured under the project. However, part of the loan for the procurement of equipment was diverted to the procurement of construction materials and this shortfall for the procurement of production equipment was met by the executing agency's own funds.</p>	<p>This change was necessary to comply with the final disbursement date of the loan.</p>
LRTTBC (Transmission System)	<ol style="list-style-type: none"> 1) Digital transmission unit 2) Optical fibres 3) Others (emergency power supply system, air-conditioning units, measuring instruments and others) 	<p>Addition of broadcasting network improvement equipment (2005) (Package 14): optical transmission system, data coding and decoding equipment, emergency power supply system and transformer</p> <p>*The installation of the equipment after the change of the original plan (to include all countries) was not conducted in some countries due to geographical conditions and the equipment was installed at the LRTTBC instead.</p>	<p>In 2004, the central government introduced a policy of further promoting the expansion of the broadcasting service area and enhancement of the broadcasting quality as part of the measures designed to improve the living standard in rural areas. Consequently, it was decided to extend the scope of this ODA loan project and to increase the number of channels, necessitating an increase of the network capacity.</p>



Photograph 1
Newly installed equipment (LTV)



Photograph 2
Newly installed equipment (RL)



Photograph 3
Building for which construction materials were provided



Photograph 4
Newly installed equipment (LRTTBC)

3.2.2 Project Inputs

3.2.2.1 Project Cost

The actual total project cost amounted to 6,865.4 million JPY against the originally planned project cost (including additional equipment, etc.) of 6,955.7 million JPY, and was lower than planned (99% of the originally planned cost). Of this, the foreign currency portion was 3,205 million JPY which was equivalent to 92% of the originally planned amount (or 100% of the approved amount) while the domestic currency portion was 3,660.4 million JPY (255.97 million RMB).

Although there were slight changes of the cost items for the total project cost, foreign currency portion and domestic currency portion, the overall cost was within the budget, achieving an efficient procurement result. The results of the interviews with the executing agency and other stakeholders indicate that the most likely reasons why the total project cost did not exceed the originally planned cost were (1) proper functioning of the principle of

competition due to an international tender for the project components and (2) continued price decline of broadcasting equipment.

3.2.2.2 Project Period

The original plans and actual results regarding the project period are compared in Table 5. The actual periods was significantly longer than planned. Although most of the causes of the delays of completion were difficult to anticipate at the project appraisal stage, the fact still remains that the overall project period was substantially extended to more than double the originally planned period.

Table 5 Planned and Actual Implementation Periods of the Project Components

	Planned Period	Actual Period
Overall Project Period	March, 2001 ~ June, 2004 (3 years 4 months)	September, 2001 ~ June, 2009 (7 years 10 months) (35% of the planned period)
LTV	September, 2001 ~ January, 2003	September, 2001 ~ September, 2007 (Commencement of full operation in September, 2007)
LETV	September, 2001 ~ May, 2002	January, 2002 ~ December, 2003 (Commencement of full operation in December, 2003)
RL	August, 2001 ~ June, 2004	July, 2002 ~ June, 2009 (Commencement of full operation in August, 2009)
LRTTBC	September, 2001 ~ April, 2003	September, 2001 ~ December, 2006 (Commencement of full operation in December, 2006)
Commencement of Operation	March, 2004	-

The principal reasons for the delayed completion of the project are listed below.

- Delay of the construction of the radio station building: (1) revision of the plan and detailed design of the radio station building due to restrictions imposed on the exterior appearance under the Urban Planning Master Plan and (2) difficulty of securing local funding (the building was completed in early 2008)
- Delay of the work due to changes of the locations of the operation rooms and others of the LTV

There were also other factors for the delay.

- Revision of the specifications for the broadcasting equipment to accommodate technological innovations (digitalisation of video and audio recording equipment, editing equipment and data transmission equipment, increase of the capacity of the data transmission network and addition of a digital communication system)
- Provision of additional broadcasting transmission line improvement equipment

Although the project cost was within the plan, the project period was exceeded; therefore efficiency of the project is fair.

3.3 Effectiveness (Rating: ③)

3.3.1 Quantitative Effects

3.3.1.1 Results from Operation and Effect Indicators

(1) Improved Quality and Quantity of Independently Produced Programmes

In regard to the “increase of the quantity” of independently produced programmes, the equipment and systems provided under the ODA loan have been fully utilised to actively produce local television and radio programmes.⁵

Table 6 Targets and Results of Operation and Effect Indicators (Quantitative Expansion)
(Indicators for which the target is set)

Indicator (Unit)	Target (2010) (Target year for LTV and RL was changed to 2015)	Result (2010)
Number of Broadcasting Hours of Independently Produced Programmes per Day (hours)	LTV: 65 hours LETV: 18 hours Radio: 186 hours	LTV + LETV: 166 hours Radio: 147 hours
Ratio of Independently Produced Programmes (%)	LTV: 22% (of broadcasting hours) LETV: 70% (of number of programmes) Radio: 96% (of number of programmes)	TV: 90% (of broadcasting hours): 166 hours/184 hours Radio: 94% (of number of programmes) 77% (of broadcasting hours)
Number of Channels	LTV + LETV: 4 Radio: 9	TV: 8 Radio: 8

Source: LRTV

Completion of the project component of providing new equipment for television and radio broadcasters has been delayed and completion is now expected to be in 2015. Nevertheless, examination of the actual achievement of the targets set at the time of appraisal reveals that the number of television channels has substantially increased (from the targeted four channels to an actual eight channels), consequently resulting in a massive increase of the number of daily broadcasting hours of independently produced programmes above the target (from the targeted 83 hours to an actual 166 hours) (target achievement ratio: 200%). These hours represent an approximate four-fold increase compared to the actual 2001 result (42 hours). The ratio of independently produced programmes has also recorded a phenomenal increase beyond the target, illustrating a major improvement.

In regard to radio broadcasting, the target had not been reached by the time of the ex-post evaluation (2011), primarily because of (1) the insufficient increase of the number of channels to the target level (target of nine channels by 2015 and an actual eight channels in 2011) and (2) approximately half of the number of broadcasting hours being filled by purchased programmes due to insufficient external human resources to produce drama and

⁵ The project executing bodies, i.e. LTV, LETV and RL, were merged in 2009 to form Liaoning Radio and Television (LRTV).

entertainment programmes (target of 186 hours and an actual 147 hours). Nevertheless, the achieved figure so far represents an increase of the actual 2001 figure of 98 hours by approximately 1.5 times (; the target achievement ratio: 79%). Meanwhile, the ratio of independently produced programmes has remained unchanged since 2001 and is slightly slower than the target (target of 96% and actual 94%).

As the actual programmes have been selected taking the needs of the audience and economic viability of operation into consideration, the actual performance in relation to each target is expected to steadily improve in the coming years.

The user survey results (Table 7) clearly indicate that the audience highly appreciates the improvements made to programmes. More than 90% of the respondents agree that both television and radio programmes have improved and more than 80% agree that concrete improvements have been made in terms of the “programme variety”, “number of programmes” and “overall broadcasting hours”.

Table 7 Evaluation of Qualitative and Quantitative Improvement of Independently Produced Programmes by the Audience

(Programme Improvement)

	Greatly Improved	Improved	Total
Television	12%	81%	93%
Radio	12%	79%	91%

(Concrete Improvement)

Category	Concrete Improvement	Television	Radio
Quantitative Improvement	Increased number of channels and programmes	94%	92%
	Increased programme variety	88%	97%
	Increased number of broadcasting hours	81%	88%
Qualitative Improvement	Improved programme quality in general	87%	85%
	Programmes meeting the needs of the audience	86%	92%
	Provision of extremely urgent/important information	74%	83%
	Improved quality of educational programmes	57%	65%

Source: User Survey

In regard to the qualitative improvement of independently produced programmes, significant progress is judged to have been made due to the introduction of the latest equipment as illustrated by the increased quantitative indicator values in the technical field, findings of the user survey and winning of awards by several programmes.

- The total off-air suspended broadcasting time for television and radio services due to accidents used to be just below the upper limit set by the central government before the introduction of the new equipment but has substantially improved since the introduction of new equipment to the point of zero accident off-air time in the case of the radio broadcasting service.
- In recent years, the nationwide viewing rate of LRTV’s programmes has been in the top 10 with some annual fluctuations among programmes transmitted by broadcasters in 23 provinces, five autonomous regions and four municipalities and the contents of LRTV’s programmes are highly appraised by the public.

- Although it is difficult to ascertain an accurate picture of the award-winning trend of independently produced programmes because of the fact that the total number of awards has been increasing, the number of awards received by LRTV has shown an increasing trend with an increase of the number of top and second prizes awarded.

The user survey found that some 90% of the audience agreed with “improved programme quality in general”, “meeting of audience needs” and “plentiful local information”, illustrating the highly positive assessment result of the improved programme quality by the audience.⁶

Table 8 Characteristics of LRTV

	Television				Radio		
	LRTV	CCTV	Municipal TV	Other Provincial TV	LRTV	CNR	Other
Plentiful local information	92%	20%	44%	20%	100%	15%	62%
Meeting of audience needs	79%	34%	40%	40%	87%	37%	37%
Large number of independently produced programmes	73%	44%	36%	50%	90%	60%	46%
High programme quality	56%	64%	18%	18%	69%	75%	17%
Rich variety and contents of programmes	51%	72%	18%	25%	85%	79%	25%
High quality educational programmes	45%	73%	11%	14%	44%	96%	12%
Plentiful provision of very urgent and/or important information	40%	81%	16%	6%	62%	98%	15%
Reliable programme contents	40%	73%	9%	10%	38%	92%	85%

Table 9 Reference Values and Actual Results of Operation and Effect Indicators (Qualitative Improvement) (Indicators for which the target value is not set)

Indicator (Unit)	Reference Value (2001)	Actual Result (2010)
Suspended broadcasting time due to accident	Radio: 2 seconds/100 hours Television: 3 seconds/100 hours	Radio: 0 seconds/100 hours Television: 0.9 seconds/100 hours

Source: LRTV

Table 10 Ranking of Nationwide Viewing Rate of Satellite Channels of Provincial Television Broadcasters

		2001	2005	2006	2007	2008	2009	2010
National Average	Ranking	18 th	-	-	-	10 th	6 th	5 th
Short-Term Data	Ranking	-	17 th	4 th	3 rd	7 th	8 th	3 rd
	Viewing Rate	-	0.04%	0.18%	0.19%	0.13%	0.14%	0.25%

Source: LRTV

⁶ Compared to competitors, both the television and radio broadcasting services of LRTV enjoy a highly positive assessment by the audience in terms of “plentiful local information”, meeting of audience needs” and “large number of independently produced programmes”. When compared with nationwide CCTV and CNR broadcasting, the performance of LRTV is somewhat inferior in terms of “reliability”, “very urgent and/or important information” and “quality”. However, the conscious efforts of LRTV to produce independent programmes to meet the needs of people in the province are highly evaluated. In short, LRTV as a local broadcaster provides information required by local people to fill the information void which cannot be filled by CCTV.

Table 11 Awards for Technical Quality of Nationwide Television and Radio Programmes Received by LRTV

	Television Programme (Golden Sail Award)			Radio Programme (Golden Deer Award)		
	LRTV/Total Number			LRTV/Total Number		
	1 st	2 nd	3 rd	1 st	2 nd	3 rd
2005	0/7	2/32	3/58	1/18	1/49	0/93
2006	0/7	2/30	3/53	0/20	3/44	2/87
2007	0/9	1/49	6/79	0/23	3/48	3/93
2008	0/18	3/52	3/60	0/24	1/49	4/97
2009	1/21	2/54	3/71	0/21	4/55	2/75
2010	1/18	4/50	1/08	0/-	2/-	4/-

Source: State Administration of Radio, Film and Television (SARFT)

(2) Facilitation of Inter-City Transmission of Information

In regard to the “facilitation of the inter-city transmission of information”, the situation prior to the project was that people living in areas far from cities were only able to watch a limited number of channels (six or less) with poor picture quality due to weak signal strength. The state of TV signal reception has significantly improved with the development of a high capacity transmission network with a yen loan as well as own funding by the Chinese side. The viewing of cable television has also widely spread.

In regard to the qualitative indicator of the “ratio of households able to view all free channels” which was set at the time of appraisal, LRTV staff members interviewed estimate that more than 95% of the provincial population can now view all free channels with good quality, suggesting a significant improvement (actual ratio in 2001: 50%; target for 2010: 93%). Meanwhile, more than 90% of the provincial population can have access to cable television of which the number of channels offered (information volume) has greatly increased to more than 100 channels (digital broadcasting) today. The introduction of a high capacity transmission network has massively increased the amount of information which can be offered by both free broadcasting and fee-paying broadcasting (cable television) services.

Some 90% of the respondents in the user survey praised the improvement made in relation to the “number of programmes and channels” and “diversity of the programmes offered”. These two are the most improved areas from the viewpoint of the audience and are the direct achievement of the newly developed high capacity transmission network.

Table 12 Actual Results for Operation and Effect Indicators

(Indicators for which the target is set)

Indicator (Unit)	Target (2010)	Actual (2010)
Ratio of households able to view all free channels (%)	93% of the provincial population	More than 95% of the provincial population

(Indicators for which the target is not set)

Indicator (Unit)	Reference Value (2001)	Actual (2010)
Number of cable television channels	Approximately 10 ~ 20 channels	Approximately 100 channels
Ratio of population able to have access to cable television (%)	-	More than 90% of the provincial population

Source: Results of interviews at LRTV

Table 13 Changing Situation of Television Viewing Following the Development of a High Capacity Transmission Network

Type of Area	Implementation Stage of ODA Yen Loan Project (Development of Inter-County Trunk Optical Fibre Network)	Development Stage of Intra-County Optical Fibre Network (Present Situation)	Population Ratio	Prior to ODA Yen Loan	After ODA Yen Loan (2010)
Suburban area	Counties in which the project has been implemented	Completed development of intra-county optical fibre network	Approx . 20%	(Free Channels) 6 channels (2 x CCTV, 3 x LRTV and 1 x municipal TV) (Fee-Paying Cable TV) 10 ~ 20 channels (greatly varies from one area to another)	(Free Channels) 6 channels (3 x CCTV, 2 x LRTV and 1 x municipal TV) (Fee-Paying Cable TV) More than 100 digital channels (varies from one area to another)
			Approx . 30%	(Free Channels) 6 channels (2 x CCTV, 3 X LRTV and 1 x municipal TV) (Fee-Paying Cable TV) None	
			Approx . 40%	(Free Channels) 6 channels (2 x CCTV, 3 x LRTV and 1 x municipal TV) but difficult to view all 6 channels in some areas because of weak signal strength (Fee-Paying Cable TV) None	
Rural area	Counties in which the project has not been implemented	Intra-county optical fibre network not yet developed	Approx . 3%	(Free Channels) 6 channels (3 x CCTV, 2 x LRTV and 1 x municipal TV) but difficult to view all 6 channels in some areas because of weak signal strength (Fee-Paying Cable TV) None	(Free Channels) 6 channels (3 x CCTV, 2 x LRTV and 1 x municipal TV)* The signal quality has much improved because of transmission from the trunk network. (Fee-Paying Cable TV) Some 50 analogue channels* Cable television channels are available using the intra-country network after initial transmission from the trunk network.
			Approx . 2%	(Free Channels) 6 channels (3 x CCTV, 2 x LRTV and 1 x municipal TV)* The signal quality has much improved because of transmission from the trunk network. (Fee-Paying Cable TV) None	
		1.2%	Difficult to receive any channels	Difficult to receive any channels	
		1.4%	Difficult to receive any channels		

Source: Compiled by the evaluator based on the results of interviews with the relevant organizations.

3.3.1.2 Results of Calculation of Internal Rate of Return (IRR)

Due to the fact that data needed for quantitative analysis was not available, analysis for the internal rate of return was not possible.

There is clear evidence that the advertising revenue has considerably increased due to the rising value of the LRTV channels as advertising media, in turn resulting from the increasing size of the audience. The operating revenue increased by some 4.2 times (or some 3.5 times after adjustment for inflation) between 1999 and 2009 with an increase of 655 million RMB (541 million RMB after adjustment for inflation). As these figures substantially exceed the planned revenue in just two years since the completion of the project (188 million JPY) and planned revenue for 2009 (218 million JPY) at the F/S stage, the actual FIRR achieved is likely to have exceeded the planned figure.

Table 14 Changes in Operating Revenue
(Unit: million RM)

	LTV	LETV	RL	Total
1999	206	4	3	203
2009	817	20	21	858
Increase	609	16	18	655

Source: LRTV

3.3.2 Qualitative Effects

(1) Qualitative Improvement of Independently Produced Programmes

The interview with a major advertising agency in China has confirmed that the qualitative improvement of the programmes produced by LRTV are highly appraised as described below.

- LRTV has sufficient strength in terms of news coverage, editing and the purchase of programmes and commands a position of absolute superiority to secure a following audience within the province. Along with improvement of the level of both its hardware and software, LRTV has trained a number of highly capable reporters, editors and programme makers.
- Compared to CCTV, LRTV is producing and broadcasting programmes which are very appealing to the provincial audience based on the provincial characteristics and lifestyle of the local audience. The contents of its programmes are highly rated by the audience. Especially high viewing rates are recorded for local news and entertainment programmes.
- Compared to CNR, LRTV (Radio) accurately understands the characteristics of the local politics, economy and culture and provides timely and accurate information, capitalising on its interactive relationship with the audience. For example, the traffic information channel provides very detailed information to help people plan their journeys and is highly rated by local people.

According to a programme producer at LRTV (Radio), radio programmes prior to the arrival of the new equipment were rather sloppy in the sense that the audience could easily tell their edited nature. This problem has now been completely eliminated with the improved editing equipment as well as improved capability of the editors.

(2) Improved Access of Local People to Various Types of Information

Using the newly developed high capacity transmission network, various types of information, including that on economic and social activities, and essential information regarding daily life are now being provided for local people. One example is an information channel for rural communities on cable television. This channel is sponsored by the provincial government and provides information on agricultural techniques/technologies and better living. With the improved infrastructure and broadcasting services, it is now possible for broadcasters to daily transmit useful information on farming and better living in rural areas and for local people to receive such information. In addition, the speedy supply of local information throughout the province has become the reality.

Furthermore, as the municipal as well as county level news and programme contents can now be instantly sent to LRTV, it has become easier for LRTV to broadcast them on the same day.

This project has largely achieved its objectives; therefore its effectiveness is high.

3.4 Impact

3.4.1 Intended Impacts

The findings of the user survey on the intended impacts of the project are given in Table 15. These impacts are (1) increased use of various types of information by local people, (2) improvement of the education standard in remote areas through the broadcasting of educational programmes, (3) rectification of the information gap through the strengthening of information access in deep inland areas and (4) improvement of the cultural (and economic) standard of local people. The actual state of manifestation of each impact is described next.

Table 15 Evaluation of Various Impacts by the Audience

		Television		Radio	
		Improved	Most Improved	Improved	Most Improved
Increased use of various types of information by local people	Increased use of information on daily life	80%	23%	95%	6%
	Increased and speedy use of information in general	77%	10%	90%	6%
	Increased use of very urgent or important information, such as disaster information	73%	12%	87%	4%
	Increased use of information on the administration and policies	66%	7%	83%	6%
Improvement of the education standard in remote areas through educational programmes	Increased opportunities for education	44%	3%	62%	7%
	Capacity building and improvement	42%	0%	58%	2%
Rectification of the information gap through strengthening of information access in deep inland areas	Rectification of the information gap experienced in remote areas of the province	10%	2%	64%	2%
Improvement of the cultural (and economic) standard	Improvement of the cultural standard	56%	7%	58%	41%
	Vitalisation of the local economy	44%	2%	46%	0%
	Increased opportunities for employment	32%	4%	44%	2%
	Increase of household income	32%	1%	38%	0%
Other	Expansion and deepening of communication among family members	54%	1%	6%	3%
	Expansion and deepening of communication in the locality	47%	2%	48%	3%

Source: User survey

(1) Increased Use of Various Types of Information by Local People (Improved Access)

As a result of the project, the number of households with access to cable television (with approximately 100 channels) has rapidly increased and the ratio of 61.89% of these households is nearly 20% higher than the national average, illustrating the great impact of the project.

Although the viewing rate for independently produced programmes and the market share of LRTV have shown a declining trend due to the availability of many more channels following the spread of cable television, the high level of viewing of independently produced programmes is evident as their viewing rate is nearly 2% higher than the viewing rate for all programmes.

The user survey found that “the increased use of various types of information by local people” is the impact which is most highly rated by the audience as some 80% of the audience agree with the improvement in terms of the “increased use of information on daily life”, “increase and speed of information in general” and “increased use of very urgent or

important information”. The impacts of television and radio broadcasting are also strong on behaviour and the way of thinking, especially in relation to “disaster response”, “shopping”, “leisure activities” and “cultural and sporting activities”.

Moreover, the findings of interviews suggest that the upgraded information broadcasting capacity of LRTV has played a certain role in mitigating disaster damage by means of the smooth transmission of information of the wide area of Liaoning Province which is liable to disaster damage primarily associated with flooding in summer and cold weather damage in winter.

Table 16 Reference and Actual Values of Indicators

Indicator (Unit)	Reference Value (2001)	Actual Value (2010)
Ratio of households viewing (multi-channel) cable television	Approx. 20%	61.89% (national average: 43.99%) (45.79% in 2008)
Share of television market		(2009)
• LRTV	43.1%	29.0%
• CCTV	27.2%	35.7%
• Other	29.7%	35.3%
Viewing rate for independently produced programmes	-	2.21% (2009) (all programmes: 0.52%)

Source: LRTV

Table 17 Impacts of LRTV on Behaviour and Way of Thinking of the Audience

Area of Impact	Television		Ratio	
	Actual Impact	Strongest Impact	Actual Impact	Strongest Impact
Response to disasters or urgent matters	86%	11%	86%	11%
Leisure activities and travel	85%	11%	89%	11%
Shopping	81%	12%	95%	9%
Cultural and sporting activities	79%	15%	85%	9%
Transport	79%	4%	89%	8%
Business and employment	72%	1%	79%	2%
Study and skill improvement	59%	2%	71%	1%
Other aspects of life	62%	2%	83%	0%
Political and social issues in general	68%	4%	71%	0%

Source: User survey

(2) Improvement of the Education Standard in Remote Areas Through Educational Programmes

Both the size of the population and the geographical area with access to education channels have increased as a result of the development of the high capacity transmission network. It is certain that the educational opportunities have increased for those wanting to study voluntarily using education programmes. However, as it has not become a common practice for schools to use the education channels, statistical data is not yet available to clearly indicate the improvement of the local education standard while verifying the causal relationship between the education channels and improved education standards.

However, the user survey indicates that almost half of the audience highly rates “increased opportunities for education” and “capacity building and improvement”. One characteristic here is that the impact on improvement is felt more greatly by radio programmes compared to television programmes by approximately 15 – 20 points.

The qualitative impacts including the broadcasting of education programmes to classrooms at the time of a SARS outbreak and a television course on business management aimed at small and medium-size enterprises. The impact of the classroom broadcasting on SARS was highly rated in the user survey.

(3) Rectification of the Information Gap Through Strengthening of Information Access in Deep Inland Areas

The user survey found that improvement in terms of “rectification of the information gap in deep inland areas” was agreed by 40% of the television audience and 64% of the radio audience, illustrating a positive impact. The general opinion is that the improvement of radio broadcasting as well as radio programme has contributed to rectification of the information gap.

In regard to television broadcasting, free terrestrial channels (basically six channels) can now be viewed in high quality due to the development of the high capacity transmission network, suggesting that the level of information obtained through television broadcasting has much improved even in deep inland areas. Because of the parallel progress of cable television coverage, some 95% of the provincial population has access to cable television. Various sources of information are, therefore, available throughout almost the entire province.

At present, there is a large information gap between those receiving the subscription cable television service and those who do not but the number of subscribing households has been rapidly increasing, partly because of the low subscription fee (approximately 24 RMB a month; subscription rate: 46% in 2008 and 62% in 2009). If this trend continues, the information gap may well be eliminated with more subscribers throughout the province.

(4) Improvement of the Cultural (and Economic) Standard

According to the findings of the user survey, the increased use of information has led to “improvement of the cultural standard”⁷ and “vitalisation of the local economy” among others as these improvements are agreed by some half of the respondents to the survey. While further improvement has been made in terms of the “household income” and “employment”, this improvement is acknowledged by only a relatively small number of respondents compared to other impacts. As mentioned earlier, the impact on shopping has been very strong, indicating the increased value of television and radio broadcasting as advertising media. This has resulted in increased advertising revenue for LRTV and it is reasonable to judge that the improved television and radio broadcasting has had a positive impact on industrial activities and economy in the province.

⁷ When the ratio of household expenditure on education and entertainment in the overall expenditure is examined as an indicator for the cultural standard, hardly any change is observed between the time of appraisal and the present.

Table 18 Reference Value and Actual Value for Indicators

Indicator (Unit)	Reference Value (2001)	Actual Value (2010)
Advertising fee for satellite channel of LRTV (19:00 ~ 21:00) (RMB)	13,000 RMB/10 seconds	44,000 RMB/10 seconds
Ratio of expenditure on education and entertainment to total consumption expenditure per rural resident	10.6%; 189 RMB	10.3%; 410 RMB (2009)
Ratio of expenditure on education and entertainment to total consumption expenditure per urban resident	13.0%; 698 RMB	10.4%; 1,284 RMB (2009)

Source: HPA Shenyang Boshi Ads Media Co., Ltd., Liaoning Statistical Yearbook

The interview with a major advertising agency in China identified various impacts of the improved television and radio broadcasting by LRTV in various economic and industrial aspects as listed below.

- Because of the high level of recognition of the programmes produced by LRTV among the local audience, many enterprises are eager to advertise on LRTV channels.
- Particularly eager to advertise on LRTV channels are enterprises in such industrial sectors as daily necessities, food and beverages, medicines, telecommunications, finance and entertainment. Examples of enterprises include such foreign enterprises as Unilever, P & G, L'Oreal and Yam! brands and such leading domestic enterprises as Sanjing Pharm, China Mobile Ltd. And Jiangzhong Pharmaceutical Co., Ltd.
- Even small and medium-size enterprises are stepping up their advertising on LRTV channels. One example is Beijing ShuLan International Clothing Co., Ltd. which is a well-known apparel brand in northeast China. The company has placed increasing emphasis on advertising on LRTV channels as a major part of its marketing strategy and its spending on advertising on LRTV in 2010 was larger than the combined figure for the previous three years (2007 ~ 2009). As a result of this intensive campaign, the turnover of the company in Liaoning Province steadily increased by tenfold in 2010 from the 2005 level. Other enterprises reaping the benefits of advertising on LRTV channels in the provincial market are Bosideng International Holding Ltd. And Sunflower Pharmaceutical Industry Co., Ltd.

3.4.2 Other Impacts

No land acquisition or resettlement was necessary as a result of the project and no special positive or negative impacts have been observed.

The implementation of the project has generally achieved the intended impacts; therefore the overall impact of the project is high.

3.5 Sustainability (Rating: ③)

3.5.1 Structural Aspects of Operation and Maintenance

LTV, LETV and RL which were the original project executing bodies were merged in 2009 to form LRTV. Although both LRTV and LRTTBC are supervised by LPARFT

(LPARFT has authority for personnel and financial matters), they are responsible for the operation and maintenance of the equipment they use.

Meanwhile, the Yen Loan Project Office of LPARFT plays a central role in the management of project-related matters in the post-project period and periodically checks the current status. The original project executing bodies (now LRTV) are properly operated under the supervision of LPARFT. Even since the merger, the production of television programmes is separately conducted from the production of radio programmes with both areas being sufficiently staffed. As such, there are no special problems in regard to the structural aspects of operation and maintenance.

3.5.2 Technical Aspects of Operation and Maintenance

At LRTV, internal and external training are actively and regularly conducted along with training provided by the equipment manufacturers. All of the equipment procured under the project and the equipment procured thereafter by the Chinese side have been effectively used and maintained without any problems.

The interview survey results suggest that the staffing level, including engineers, is sufficient for the proper maintenance of the equipment. Technical guidance and the supply of manuals for training at the time of equipment delivery were properly conducted. The necessary training has been provided and the operating rate of the equipment is high with sufficient maintenance work. As such, no special problems have been either detected or are foreseen regarding the technical aspects of operation and maintenance.

3.5.3 Financial Aspects of Operation and Maintenance

As LRTV is run as a provincial government body, its accounts are handled to balance the revenue with the expenditure. In 2009, while LRTV received a subsidy of 96.74 million RMB, it contributed 57.40 million RMB to the provincial coffers in addition to total expenditure of 86.93 million RMB for government events and other occasions. As such, the overall financial performance is in the black but the accounts are balanced with contributions to provincial events, etc. as a provincial government body. The operating revenue rapidly increased from 203 million RMB in 1999 to 858 million RMB in 2009, primarily because of the improved value of LRTV channels as advertising media and the general economic growth of north-eastern China. At the end of 2009, LRTV had net assets of approximately 590 million RMB.

Much of the broadcasting equipment procured under the project has reached the time of renewal because of its short service life in view of rapid technological innovation. As the operating revenue has been steadily increasing, LRTV has invested more than 100 million RMB a year in fixed assets, including the procurement of new equipment, in recent years. As such, no special problems have been either detected or are foreseen in regard to the setting aside of sufficient funds for the procurement of new equipment.

Table 19 Historical Changes of LRTV Investment in Fixed Assets (2006 ~ 2010)

(Unit: '000 RMB)

	2006	2007	2008	2008	2010
Television	23,062	28,265	152,980	67,635	106,874
Radio	8,311	6,080	6,434	22,093	3,265

Note: The investment amount for radio in 2010 is for the first six months of the year.

Source: LRTV

In the case of LRTTBC, it is not expected to generate a profit and is maintained by a subsidy from the Liaoning Provincial Department of Finance (2010: 21.06 million RMB). LRTTBC does not charge for its broadcasting signal transmission service. In regard to the renewal of equipment approaching the end of its expected life span, there is a strong social need to at least maintain the current level of service. It is, therefore, anticipated that the necessary renewal of equipment will be conducted using a provincial government grant even though the timing of such renewal (and grant) is not clear at present. The actual revenue for the general account of Liaoning Province rapidly increased to as much as 159.1 billion RMB in 2009, registering a 4.3 times increase from 37 billion RMB in 2001 (3.6 times after adjustment for inflation). No problems are, therefore, anticipated in regard the provincial government's ability to finance the renewal of equipment at LRTTBC.

3.5.4 Current Status of Operation and Maintenance

At the time of ex-post evaluation, all of the equipment introduced at LRTV and LRTTBC under the project is properly maintained and the high operating rate indicates the effective use of such equipment. However, some of the equipment introduced to the former LTV, including the digital video camera system, is now beginning to exceed its service life and its renewal next year or the following year is highly likely. The equipment at LRTTBC is also aging as evidenced by the increased number of breakdowns, prompting a plan for its renewal. Such renewal will not pose any problems in view of the financial situation of the provincial government and LRTV.

When the former LETV was merged with LTV and LR in 2009 to form LRTV to be placed under the supervision of LPARFT, the production equipment provided for LETV under the project was transferred to the Liaoning Provincial Department of Education in view of the fact that it had passed its expected service life. All of the equipment, etc. transferred to the Department of Education will be further transferred to Shenyang Normal University. Some of the equipment has already been transferred and is being used as educational equipment and for university events. The remaining equipment (studio system, etc.) will be transferred to Shenyang Normal University as soon as the planned transfer has been approved (it was stored at the Department of Education at the time of ex-post evaluation). The equipment provided to LRTV is effectively used at present but will be transferred free of charge to broadcasting stations of lower level governments when it deteriorates in the coming years.

No major problems have been observed in the operation and maintenance system; therefore sustainability of the project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of this project was to upgrade the programme making equipment and systems and to improve the programme transmission systems for television and radio broadcasters in Liaoning province, thereby improving the quality and quantity of independently produced programmes and facilitating the inter-city transmission of information in the province. As this objective of the project matched the development policies of the country and province at the time of both appraisal and ex-post evaluation, the relevance of the project was high. While the intended outputs have generally been achieved as planned, the lengthy extension of the project period has made the project efficiency fair. The introduction of the latest equipment and subsequent effective use of such equipment have led to a noticeable improvement in the quality and quantity of independently produced programmes as well as information provided in the province. The newly broadcast programmes and information have not only had a significant impact on the lives of the audience in the province but have also had the effect of making enterprises aware of and use television and radio broadcasting as very important advertising media. As such, the project has achieved a high level of effectiveness. No problems have been observed in terms of the structural, technical and financial aspects of the project, illustrating its high level of sustainability. In light of the above, this project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

The equipment at LRTTBC is now approaching the time for its renewal. When any of the equipment at LRTTBC breaks down, the reception of TV signals for not only cable television in the province but also for free broadcasting channels in remote areas can be adversely affected. Because of the strong social need to maintain and improve the level of equipment at LRTTBC, it is highly likely that the Liaoning Provincial Department of Finance will approve any necessary funding for equipment renewal at LRTTBC. An early response is, however, preferable to ensure the necessary renewal and upgrading, making it essential for the provincial government to set aside sufficient funds for these purposes.

4.2.2 Recommendations to the JICA

None

4.3 Lessons Learned

(1) Necessity to Properly Respond to Projects Involving Equipment Subject to Rapid Technological Innovation

The project aimed at providing a range of broadcasting equipment of which the technological innovation is rapid. The provision of equipment was substantially delayed in the case of one of the executing agencies but the actual equipment which was eventually provided following consultations between the Japanese and Chinese sides was the latest

equipment as hoped for by the Chinese side, resulting in the improved effectiveness of and high level satisfaction with the project on the part of the executing agencies. Although it is essential to ensure the swift delivery of equipment in the case of a project in which the equipment involved is subject to rapid technological innovation to avoid any delay of the project completion, it is equally important to fully consult with the recipient country to take the technical trends of the equipment to be provided into full consideration. Careful consideration is particularly necessary once a project experiences a delay.

The project implementation period to upgrade broadcasting equipment and systems with a yen loan happened to overlap with a period of economic growth as well as an expanding demand for broadcasting services in the target province. As a result, fresh investment and the renewal of equipment proceeded very smoothly, resulting in highly positive outcomes. In other words, because of the high level sustainability of the project, the yen loan functioned as seed money. One important lesson learned from the project is the need to ensure “sustainability” which demands the appropriate renewal of equipment in due course at the initial planning stage of a project such as the present broadcasting equipment upgrading project which requires that the project executing agency and government of the recipient country renew the equipment at an early stage in the post-project period.

(2) Relationship Between Project Objectives and Higher Goals of a Broadcasting Equipment Upgrading Project

The project itself was implemented by a limited number of stakeholders, including provincial television and radio broadcasters, and its objective was of strong interest for the stakeholders. Meanwhile, the higher goals tend to be somewhat abstract with wide implications for society in general, typically embodied by such goals as “improvement of the economic and cultural standard” and “rectification of the regional information gap”. When the higher goals are set too far away from the immediate objective of a project, it may result in a loss of interest in the impacts among the stakeholders. In the context of the present project, this possibility is manifest in a more tangible manner if such functions as the production and distribution of the contents are conducted by different organizations.

A direct impact of a broadcasting improvement project is thought to be “its impact on the way of thinking, knowledge and behaviour of the public”. It is essential that the executing agency and other stakeholders set and share higher goals which can be easily recognised by all those involved and the project must be implemented with careful consideration of the set higher goals.

(3) Active Utilisation of Superior Japanese Technologies

In many countries, there is strong trust in Japanese broadcasting equipment, especially digital equipment, to the extent that the concept of “Japanese technologies being the front-runner” has been firmly established. In the case of the project which was an ODA loan project employing, in principle, general competitive bidding, the recipient country was eager to introduce Japanese equipment. As a result, Japanese products and technologies were smoothly introduced. As the expected improvement effects and merits are particularly large when the technological level of equipment prior to a project is low as in the case of the

present project, it is important to actively promote projects involving superior Japanese technologies and equipment using the STEP and other schemes.

(4) Competent Equipment Management in a Project Involving Equipment Subject to Rapid Technological Innovation

Most broadcasting equipment is subject to rapid technological innovation and some equipment may require renewal in less than 10 years after its initial installation due to it becoming obsolete. In the course of the ex-post evaluation, the evaluator discovered that after the expiry of its service life, equipment originally provided under the project for LETV was transferred to the Liaoning Department of Education instead of LRTV following the change of the supervisory agency. Although it is planned to further transfer this equipment to Liaoning Normal University, the executing agency (now LRTV) does not have a fully picture of what is going on.

In the case of a project which mainly involves the provision of equipment, it is desirable to develop a mechanism whereby any substantial change regarding the current status of the equipment provided, be it “a change of the management body” or “the abandonment or transfer of equipment”, is properly reported to the competent JICA office. In this context, it must be noted that the thorough management of every single piece of equipment, etc. is difficult and not so important from the viewpoint of achieving the development objective of the project. Instead, arrangements should be put in place which allow the JICA to establish a general picture of each equipment package and the current status (in operation, abandoned or transferred as well as any change of the management body) of the main equipment based on regular reports or other means.

Comparison between the Original Plan and Actual Results

Item	Original Plan	Actual Results
1. Outputs	<p>(LTV: Production Equipment)</p> <p>1) Outdoor broadcasting van system 2) Outdoor satellite van system 3) Digital video camera system 4) Editing equipment 5) Others (measuring instruments, etc.)</p> <p>(LETV: Production Equipment)</p> <p>1) Digital video camera system (for use in the new studio) 2) Editing equipment 3) Others (measuring instruments, etc.)</p> <p>(RL: Production Equipment and Construction Materials)</p> <p>1) Outdoor broadcasting van system and outdoor audio recording van system 2) Editing equipment 3) Construction materials</p> <p>(LRTTBC: Transmission System)</p> <p>1) Digital transmission unit 2) Optical fibres 3) Others (emergency power supply system, air-conditioning units, measuring instruments and others)</p>	<p>(LTV: Production Equipment)</p> <p>1) Outdoor broadcasting van system 2) Outdoor satellite van system 3) Digital video camera system 4) Editing equipment 5) Others (measuring instruments, etc.)</p> <p>(Changes Made)</p> <p>Equipment onboard vans (2003) Changes of the technical specifications, etc. for cameras and cancellation/addition of some equipment</p> <p>(LETV: Production Equipment)</p> <p>As planned</p> <p>(RL: Production Equipment and Construction Materials)</p> <p>As planned</p> <p>(LRTTBC: Transmission System)</p> <p>1) Digital transmission unit 2) Optical fibres 3) Others (emergency power supply system, air-conditioning units, measuring instruments and others)</p> <p>(Changes Made)</p> <p>Addition of broadcasting network improvement equipment due to widening of the target area (2005)</p>
2. Project Period	<p>March, 2001 to June, 2004 (3 years 4 months)</p>	<p>September, 2001 to June, 2009 (7 years 10 months)</p>
3. Project Cost	<p>(Inclusive of Additional Equipment)</p> <p>Foreign Currency 3,481 million JPY Local Currency 3,474.9 million JPY (267.3 million RMB)</p> <p>Total 6,955.9 million JPY Of which JICA Loan 3,210 million JPY Exchange Rate 1 RMB = 13.0 JPY (as of 2001)</p>	<p>3,205 million JPY 3,660.4 million JPY (255.97 million RMB)</p> <p>6,865.4 million JPY 3,205 million JPY 1 RMB = 14.3 JPY (average for 2001 through 2009)</p>