

10-5 Financial Analysis

For the project evaluation, the financial analysis is conducted from the viewpoint of the general capital to evaluate revenue that will be obtained from project itself.

(1) Analyzing method and preconditions

As the method of the financial analysis, the cost benefit analysis is adopted, which is widely used in general. Preconditions set up in conducting the cost benefit analysis are summarized below:

1) Incremental cost benefit

Difference of the revenues after and before the rehabilitation. The revenue after the rehabilitation is regarded as the incremental cost benefit, i.e., against the investment.

2) Estimation of investment cost

The investment cost is estimated in both foreign and local currency portion according to the market price as of June, 1989. Currency exchange rate between foreign currency (US\$) and local currency (Rupiah) is set at US\$1.00= Rp. 1,771 (as of June 1, 1989).

3) Service life

The service life of the project to evaluate the profitability is set to 15 years after rehabilitation.

4) Operation and maintenance costs

Generally, the operation and maintenance costs consist of the fixed cost which depends on the scale invested in the facilities, and the variable cost. Only the operation and maintenance costs to be generated by the newly invested facilities are evaluated in this Study.

5) Scope of revenue estimation

Since the abovementioned revenue in proportion to the investment cost proposed as a result of the study shall be the benefit which is subtracted from the benefit generating from the existing facilities of RRI, TVRI and E/C as estimated in loss and profit statement and from the ongoing projects.

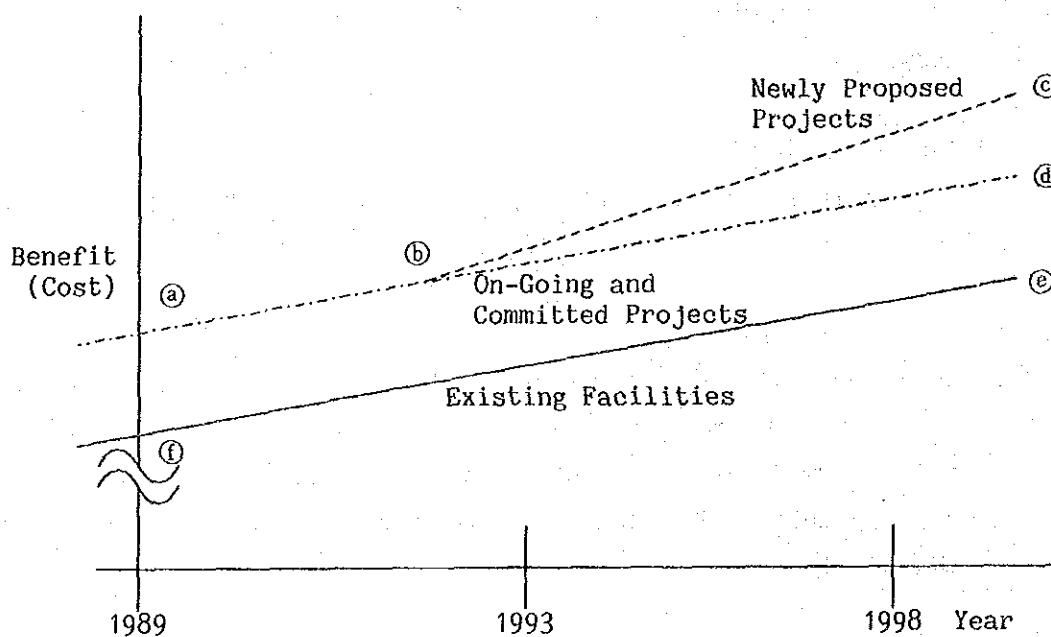
6) Evaluation method and scope of analysis.

The method of evaluation and the scope of analysis are as follows:

a) Method of evaluation: Incremental benefit-cost analysis

b) Scope of analysis:

Financial and economic evaluations are made not only for newly proposed projects (Area surrounded by ②, ③, ④ shown in the following Figure) but also for the combination of the on-going and committed projects decided by RTF and newly proposed projects (Area surrounded by ①, ②, ③, ④, ⑤ in the same Figure).



Incremental Benefit-Cost Analysis

(2) Profitability indices

Commonly used indices of the internal rate of return (IRR) are utilized to evaluate the profitability. These indices are calculated by using the benefit flow and cost flow which belong to the Study.

Cash flow is calculated according to the two cases of New Proposed Projects and Combination of Ongoing Projects and New Proposed projects. (refer to Table 10-5-1 and Table 10-5-2)

- 1) In case of New Proposed Projects FIRR is 2.3%.
- 2) In case of combination of on-going projects and new proposed projects FIRR is 6.5%.

(3) Case Study

Prospect of TV subscription fee, Government subsidy and other income. Based on the above estimation, a study was made on how it is possible to cover the operation cost by raising the collection rate or revising the TV subscription fee and reducing government subsidy based on the following conditions;

1) Case 1:

a-1) TV License Fee shall be revised as follow;

Monochrome : Rp. 2,000/per month

Color : Rp. 5,000/per month

a-2) TV License fee collection rate shall be up to

63% (1989), 70% (1990-93), 73% (1994),

83% (1995) and 88% (1996-2000).

b) TV news fee shall be increased by 8.2% as same as past trend.

c) TV other income shall be increased by 8.2% as same as past trend.

d) Government subsidy shall be increased by 8.5% as same as past trend and after 1994, it shall be "0".

2) Case 2:

a-1) TV License fee shall not be changed as the current subscription fee, but it shall be simplified into two class:

Monochrome : RP. 1,000/per month

Color : RP. 2,500/per month

- a-2) TV License fee collection rate shall be increased upto;
63% (1989), 70% (1990-93), 73% (1994), 83% (1995),
and 88% (1996-2000).
- b) TV news fee shall be increased by 8.2% as same as past trend.
- c) TV other income shall be increased by 8.2% as same as past trend.
- d) Government subsidy shall be increased by 8.5% as same as past trend.

3) Case 3:

- a-1) TV License fee shall be revised as follow;

Monochrome : Rp. 2,000/per month

Color : Rp. 5,000/per month

- a-2) TV License fee collection rate shall be up to
63% (1989-2000).
- b) TV news fee shall be increased by 8.2% as same as past trend.
- c) TV other income shall be increased by 8.2% as same as past trend.
- d) Government subsidy shall be increased by 8.5% as same as past trend.

4) Case 4:

- a-1) TV License fee shall be revised as follow;

Monochrome : RP. 1,500/per month

Color : Rp. 3,750/per month

- a-2) TV License fee collection rate shall be increased upto;
63% (1989), 70% (1990-93), 73% (1994), 83% (1995),
and 88% (1996-2000).
- b) TV news fee shall be increased by 8.2% as same as past trend.
- c) TV other income shall be increased by 8.2% as same as past trend.
- d) Government subsidy shall be increased by 8.5% as same as past trend and after 1994, it shall be "0".

(4) Analysis of case study and recommendation

1) Analysis of Case-1

After analysing the Case-1 of the profit and loss statement for the long term plan of the RTF, it is found that the RTF can realize all the projects of the ongoing projects and new proposed projects. Those projects are estimated 6.5% of FIRR for ongoing & new proposed project and 2.3% for new proposed project.

2) Analysis of Case-2

After analysing the Case-2 of the profit and loss statement for the long term plan of the RTF, it is found that the RTF can realize only 87% of ongoing projects. Those projects are estimated -2.1% of FIRR for ongoing projects & new proposed projects, and -7.3% of FIRR for the new proposed projects therefore new proposed projects can not be realized.

3) Analysis of Case-3

After analysing the Case-3 of the profit and loss statement for the long term plan of RTF, it is found that the RTF can realize 100% of the ongoing projects and only 58% of the new proposed projects. FIRR for the ongoing projects & new proposed projects is 2.1% and for the new proposed projects have -2.8% of FIRR.

4) Analysis of Case-4

After analysing of the Case-4 of the profit and loss statement for the long term plan of RTF, it is found that the RTF can realize 91% of the ongoing project and can not realize the new proposed projects. And then FIRR for the ongoing projects & new proposed projects is estimated 2.9% and that for the new proposed project is estimated -1.6%.

5) Recommendation of case

According to the above case study, the Case-1 shall be recommended for the long term plan of RTF in order to realize the all projects.

(5) Comparison of Cost and Income

After analyzing several simulations, it was found that the Case-1 should be satisfied to cover the operation cost of RRI, TVRI and EC (shown in Tables 10-5-3, 10-5-4 and Fig 10-5-1).

TABLE 10-5-1] PROJECTED CASH FLOW FOR LONG TERM PLAN OF BROADCAST SECTOR
(ON GOING & NEW PROPOSED PROJECT) (CASE 1)

(UNIT: MILLION RP.)

YEAR	Investment Cost (FC, LC)	Investment Cost (LF)	Total Investment Cost	Incremental Operational Cost	Incremental Total Cost	Existing Revenue	Incremental Operational Revenue	Incremental Total Revenue	Net Benefit
1988	0	0	0	0	0	0	0	0	0
1989	104,786	0	104,786	256	105,042	4,203	0	4,203	-105,042
1990	110,709	0	110,709	860	111,570	13,122	3,701	16,823	-107,869
1991	66,945	0	66,945	1,810	68,754	73,561	20,748	94,309	-48,007
1992	86,061	0	86,061	3,602	89,664	79,497	22,422	101,919	-67,242
1993	83,783	0	83,783	6,694	90,477	86,239	24,324	110,563	-66,153
1994	70,510	0	70,510	8,049	78,559	99,569	28,084	127,653	-50,476
1995	75,592	7,440	83,032	13,654	96,686	128,733	36,309	165,042	-60,377
1996	61,037	7,440	68,477	14,344	82,821	150,902	42,362	193,264	-40,259
1997	31,305	4,960	36,265	14,870	51,135	164,369	46,360	210,729	-4,775
1998	28,860	4,960	33,820	15,490	49,310	179,402	50,600	229,999	1,290
1999	0	0	0	16,142	16,142	196,148	55,324	251,472	39,182
2000	0	0	0	16,277	16,277	214,770	60,576	275,346	44,299
2001	0	0	0	16,416	16,416	235,449	66,409	301,858	49,992
2002	0	0	0	16,559	16,559	258,382	72,877	331,259	56,316
2003	0	0	0	16,706	16,706	283,787	80,042	363,829	63,337
2004	0	0	0	16,857	16,857	283,787	87,973	371,760	71,116
2005	0	0	0	17,012	17,012	283,787	96,743	380,530	79,731
2006	0	0	0	17,172	17,172	283,787	106,435	390,212	89,263
2007	0	0	0	17,335	17,335	283,787	117,139	400,922	99,803
2008	0	0	0	17,504	17,504	283,787	128,954	410,461	111,450
2009	0	0	0	17,678	17,678	283,787	141,990	421,767	124,513
2010	0	0	0	17,856	17,856	283,787	156,368	434,223	138,512
2011	0	0	0	18,039	18,039	283,787	172,221	446,026	154,182
2012	0	0	0	18,227	18,227	283,787	189,693	461,920	171,466
2013	0	0	0	18,421	18,421	283,787	208,093	471,908	189,672
TOTAL	719,589	24,800	744,389	357,851	1,102,220	5,106,000	2,015,947	7,121,947	933,727
							FIRR		6.52%

TABLE 10-5-2) PROJECTED CASH FLOW FOR LONG TERM PLAN OF BROADCAST SECTOR
(NEW PROPOSED PROJECT) (CASE 1)

(UNIT: MILLION RP.)

YEAR	Investment Cost (FC-IC)	Investment Cost (LF)	Total Investment Cost	Incremental Operational Cost	Incremental Total Cost	Existing Operational Revenue	Incremental Operational Revenue	Net Operational Benefit
1988	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	4,205	0	0
1990	0	0	0	0	0	13,114	0	0
1991	0	0	0	0	0	73,544	0	0
1992	39,327	0	39,327	0	39,327	79,479	0	-39,327
1993	31,959	81	31,959	81	32,040	86,220	5,527	-26,514
1994	36,237	449	36,237	449	36,686	99,569	6,383	-30,505
1995	43,561	0	43,561	0	43,561	128,807	8,257	-40,919
1996	38,585	0	38,585	5,615	44,200	151,021	9,681	-34,723
1997	31,305	0	31,305	5,960	37,265	164,499	10,545	-26,720
1998	28,860	0	28,860	6,182	35,042	179,543	11,509	-23,533
1999	0	0	0	6,258	6,258	196,302	12,583	6,325
2000	0	0	0	6,282	6,282	214,938	13,778	7,496
2001	0	0	0	6,306	6,306	235,633	15,105	8,799
2002	0	0	0	6,331	6,331	258,583	16,576	10,245
2003	0	0	0	6,356	6,356	284,006	18,206	11,849
2004	0	0	0	6,382	6,382	284,006	20,009	13,627
2005	0	0	0	6,409	6,409	284,006	22,004	15,595
2006	0	0	0	6,437	6,437	284,006	24,208	17,771
2007	0	0	0	6,465	6,465	284,006	26,643	20,177
2008	0	0	0	6,494	6,494	284,006	29,330	22,836
2009	0	0	0	6,524	6,524	284,006	32,295	25,770
2010	0	0	0	6,555	6,555	284,006	35,565	29,010
2011	0	0	0	6,587	6,587	284,006	39,170	32,583
2012	0	0	0	6,620	6,620	284,006	43,144	36,525
2013	0	0	0	6,653	6,653	284,006	47,523	40,870
TOTAL	249,834	0	249,834	120,767	370,601	5,009,529	448,041	77,441
							FIRR	2.27%

TABLE 10-5-33 PROFIT AND LOSS STATEMENT FOR LONG TERM PLAN OF BROADCAST SECTOR
(ON GOING & NEW PROPOSED PROJECT) (CASE 1)

(UNIT: MILLION RP.)

YEAR	(1) License Fee	(2) News cover Fee	(3) REVENUE Others	(4) Subsidy	(5) + (4) = (5)		(6) Total Personal Cost	(7) Total Operational Cost	(8) Total Depreciation Cost	(9) = (9)		(10) Operational Profit/Loss	(11) Loan Interest	(12) Grand Total Cost	(13) Net Profit/Loss
					Total Revenue	Total Cost				Total Cost	Total Profit/Loss				
1988	54,136	3,759	2,209	26,250	86,354	47,539	26,475	11,378	85,392	902	0	85,392	0	85,392	962
1989	59,457	4,067	2,390	28,481	94,396	50,987	29,278	9,753	90,017	4,579	0	90,017	0	90,017	4,379
1990	70,824	4,401	2,586	30,902	108,713	54,684	32,763	13,145	100,593	8,121	0	100,593	0	100,593	8,121
1991	148,241	4,762	2,798	33,529	189,330	59,459	36,233	16,420	112,113	77,217	0	112,113	0	112,113	77,217
1992	155,783	5,152	3,028	36,379	200,341	65,728	40,070	13,000	118,798	81,543	0	118,798	0	118,798	81,543
1993	164,356	5,575	3,276	39,471	212,678	72,637	46,065	9,471	128,172	84,505	0	128,172	0	128,172	84,505
1994	181,376	6,032	3,545	0	190,952	79,102	56,048	30,909	164,059	26,893	64,783	228,842	64,783	228,842	-37,890
1995	218,694	6,526	3,835	0	229,056	92,884	62,555	36,842	192,081	36,974	76,205	268,286	76,205	268,286	-39,231
1996	247,043	7,061	4,130	0	258,254	99,671	74,331	44,319	218,321	39,932	85,292	303,613	85,292	303,613	-45,360
1997	264,235	7,640	4,490	0	276,365	106,951	87,731	50,916	245,598	30,767	89,194	334,792	89,194	334,792	-58,427
1998	283,434	8,267	4,838	0	296,539	114,764	103,217	54,655	272,656	23,923	92,444	365,080	92,444	365,080	-68,521
1999	304,828	8,945	5,256	0	319,030	123,893	120,198	58,385	302,476	16,534	89,578	392,054	89,578	392,054	-73,024
2000	328,628	9,678	5,688	0	343,994	132,566	132,217	58,385	323,168	20,826	86,166	409,334	86,166	409,334	-65,340

Table 10-5-4 Comparison of Profit and Loss Statement
(Ongoing & New Proposed Project)

(in Billion Rp.)

Case	1993				1998				
	RRI	TVRI	EC	Total	RRI	TVRI	EC	Total	
Case 1	Revenue	28.1	184.4	0.2	212.7	0.0	296.6	0.0	296.6
	Expenditure	29.2	98.8	0.2	128.2	111.5	147.8	13.3	272.6
	Profit/Loss	-1.1	85.6	0.0	84.5	-111.5	148.8	-13.3	24.0
Case 2	Revenue	28.1	102.2	0.2	130.5	42.2	171.7	0.3	214.2
	Expenditure	29.2	98.8	0.2	128.2	111.5	147.8	13.3	272.6
	Profit/Loss	-1.1	3.4	0.0	2.3	-69.3	23.9	-13.0	-58.4
Case 3	Revenue	28.1	161.2	0.2	189.5	42.2	224.4	0.3	266.9
	Expenditure	29.2	98.8	0.2	128.2	111.5	147.8	13.3	272.6
	Profit/Loss	-1.1	62.4	0.0	61.3	-69.3	76.6	-13.0	-5.7
Case 4	Revenue	28.1	143.1	0.2	171.4	0.0	225.7	0.0	225.7
	Expenditure	29.2	98.8	0.2	128.2	111.5	147.8	13.3	272.6
	Profit/Loss	-1.1	44.3	0.0	43.2	-111.5	77.9	-13.3	-46.9

Fig. 10-5-1 Case Study for Realization in Operation

Case Study	Income condition			FIRR (%)		Realization of project		Profit and Loss	
	License Fee	News, etc.	Subsidy	Ongoing & proposed	Proposed project	Ongoing	Proposed	Ongoing projects	Ongoing & Proposed projects
CASE - 1	Fee: 200 % Collection %: 63 % - 88 %	As per past trend by 8.2 % (Accounted for 3 % of TVRI income in 1988)	• As same as 1988 base upto 1994 by 8.5 % • After 1994 would be "0"	6.52 %	2.27 %	100 %	100 %		
CASE - 2	Fee: 100 % Collection %: 63 % - 88 %	As per past trend by 8.2 % (Accounted for 3 % of TVRI income in 1988)	• Growth rate and amount are as per past trend as 8.5 % (accounted for some 30 % of total income of RRI & TVRI)	- 2.04 %	- 7.25 %	87 %	0 %		
CASE - 3	Fee: 200 % Collection %: 63 %	As per past trend by 8.2 % (Accounted for 3 % of TVRI income in 1988)	• Growth rate and amount are as per past trend as 8.5 % (accounted for some 30 % of total income of RRI & TVRI)	2.04 %	- 2.75 %	100 %	58 %		
CASE - 4	Fee: 150 % Collection %: 63 % - 88 %	As per past trend by 8.2 % (Accounted for 3 % of TVRI income in 1988)	• As same as 1988 base upto 1994 by 8.5 % • After 1994 would be "0"	2.9 %	- 1.62 %	91 %	0 %		

10-6 Economic Analysis

(1) Estimate conditions for economic cost

The financial cost (cost estimated according to the market price) calculated in the preceding chapter is converted to the economic cost. The following conditions for the calculation price are set up.

1) Estimation of border prices

Materials and equipment prices (local currency portion) which will be procured in Indonesia is converted to the border prices by multiplying the standard conversion factor (SCF).

SCF calculated by the following formula is 0.96.

$$SCF = \frac{Im + Ex}{Im + Tm + Ex - Tx}$$

Where, Im = annual import amount

Tm = annual export amount

Ex = annual import tariff amount

Tx = annual export tariff amount

2) Unskilled workers

Because the proportion of the local currency portion is low, potential wages of unskilled workers are not calculated.

3) Land prices

Land prices are not considered, because the existing facilities are rehabilitated.

(2) Estimation of economic benefits

The conditions for estimating economic benefits which will generate through the implementation of this project are as follows:

1) Preconditions

Social benefit of broadcasting is great. However, measurable economic benefits only are estimated. Border prices do not exist in the broadcasting service. Benefits that will generate from this project are to estimate willingness to pay against

broadcasting service of beneficiaries (consumers). In this economic analysis, the alternative plan of the public broadcasting service is private broadcast service, the economized costs shall be regarded as the economic benefit.

2) Calculation price

RCTI (private broadcast) presently operates in Jakarta, and the monthly TV viewers rate is Rp. 30,000. Difference between RCTI's viewers rate and TVRI's average viewers rate shall be regarded as the economic benefit.

In addition, the above benefit unit price is reduced by 20%, considering wage difference between Jakarta and the national average.

Market prices as calculated above are converted to border prices by multiplying SCF, which shall be the calculation prices. Economic benefits of radio are not calculated, because they are difficult to estimate.

3) Scope for economic benefit estimation

Beneficiaries' and consumers' willingness to pay for broadcast is estimated on a nationwide base. Since there is a private broadcast in Jakarta only, the number of RCTI private broadcast's receivers possessed is obtained by possession ratio of Jakarta TVRI's receivers, and this ratio is applied to each province.

(3) Economic evaluation

Cash flow is calculated according to the two cases of JICA Study Projects, and combination of Ongoing Projects and Newly Proposed Projects (refer to Table 10-6-1 and Table 10-6-2).

The calculated results are as follows:

(a) In the case of New Proposed Projects: EIRR 12.1%

(b) In the combination of Ongoing

projects and New Proposed Project : EIRR 16.2%

Since opportunity cost of capital in Indonesia is about 12%, EIRR of the project as proposed in this Study exceeds the above percentage.

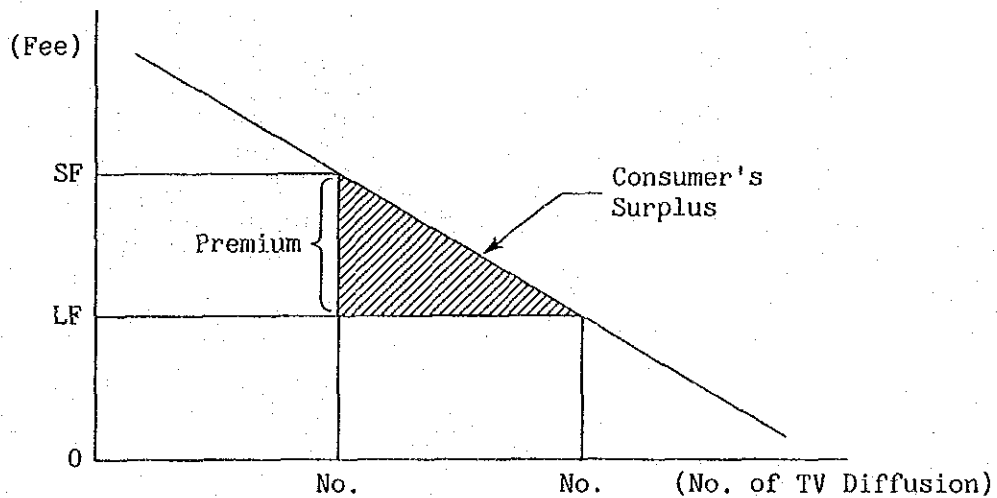
(4) Consumer's Surplus estimation

For consumer's surplus benefit that derives from combination of ongoing projects and proposed project or proposed projects only, estimate are made by the following formula.

$$\text{Yearly Benefit} = (\text{SF} - \text{LF}) \times \text{AIL} \times \text{No} \times 1/2 \times \%$$

where,

- SF : Subscription fee of RCTI (Rp. 30,000/Month)
- LF : License fee of TVRI (Average Rp. 1,900/Month upto 1990, Rp. 3,500/Month after 1991)
- AIL : Adjustment of income level (Average income level in Indonesia is about 80% of income level of DKI Jakarta)
- No : Number of Difference TV sets between RCTI and TVRI (Number of TV diffusion sets in each province derided by subscriber's ratio of RCTI in DKI Jakarta)
- % : Revenue Distribution Ratio (For combination of ongoing projects and proposed projet: 22%, for proposed projects only: 7%)



[TABLE:10-6-1]

PROJECTED CASH FLOW FOR ECONOMIC ANALYSIS OF LONG TERM PLAN
IN BROADCAST SECTOR (ON GOING & NEW PROPOSED PROJECT)

(UNIT: MILLION RP.)

Year	Incremental Economic Benefit	Investment (FC) Cost	Investment (LF) Cost	Incremental Economic Cost	Total Economic Cost	Net Benefit
1988	0	0	0	0	0	0
1989	0	100,595	0	246	100,841	-100,841
1990	79,813	106,281	0	826	107,107	-27,294
1991	76,467	64,267	0	1,737	66,004	10,463
1992	77,702	82,619	0	3,458	86,077	-8,375
1993	78,976	80,432	0	6,426	86,858	-7,882
1994	80,289	67,690	0	7,727	75,417	4,872
1995	81,642	79,710	7,142	13,109	99,961	-18,319
1996	83,037	65,738	7,142	13,771	86,651	-3,614
1997	84,476	34,814	4,762	14,102	53,678	30,798
1998	85,958	32,467	4,762	14,517	51,746	34,212
1999	87,487			15,132	15,132	72,355
2000	89,063			15,252	15,252	73,811
2001	90,687			15,375	15,375	75,312
2002	92,362			15,501	15,501	76,861
2003	94,089			15,631	15,631	78,458
2004	95,868			15,764	15,764	80,104
2005	97,703			15,901	15,901	81,802
2006	99,595			16,043	16,043	83,552
2007	101,545			16,188	16,188	85,357
2008	103,555			16,337	16,337	87,218
2009	105,627			16,490	16,490	89,137
2010	107,763			16,649	16,649	91,114
2011	109,966			16,810	16,810	93,156
2012	112,236			16,976	16,976	95,260
2013	114,577			17,147	17,147	97,430
TOTAL	2,230,484	714,613	23,808	317,115	1,055,536	1,174,948
					EIRR	16.15%

[TABLE:10-6-2]

PROJECTED CASH FLOW FOR ECONOMIC ANALYSIS OF LONG TERM PLAN
IN BROADCAST SECTOR (NEW PROPOSED PROJECT)

(UNIT: MILLION RP.)

Year	Incremental Economic Benefit	Investment (FC) Cost	Investment (LF) Cost	Incremental Economic Cost	Total Economic Cost	Net Benefit
1988	0	0	0	0	0	0
1989	0	0	0	0	0	0
1990	0	0	0	0	0	0
1991	0	0	0	0	0	0
1992	0	37,754	0	0	37,754	-37,754
1993	25,129	30,681	0	78	30,759	-5,630
1994	25,546	34,787	0	431	35,218	-9,672
1995	25,977	41,818	0	5,390	47,208	-21,231
1996	26,421	37,042	0	5,586	42,628	-16,207
1997	26,879	30,053	0	5,722	35,775	-8,896
1998	27,350	27,706	0	5,935	33,641	-6,291
1999	27,837			6,008	6,008	21,829
2000	28,338			6,031	6,031	22,307
2001	28,855			6,054	6,054	22,801
2002	29,388			6,077	6,077	23,311
2003	29,937			6,102	6,102	23,835
2004	30,504			6,127	6,127	24,377
2005	31,087			6,153	6,153	24,934
2006	31,689			6,179	6,179	25,510
2007	32,310			6,207	6,207	26,103
2008	32,949			6,235	6,235	26,714
2009	33,609			6,263	6,263	27,346
2010	34,288			6,293	6,293	27,995
2011	34,989			6,324	6,324	28,665
2012	35,712			6,355	6,355	29,357
2013	36,456			6,387	6,387	30,069
TOTAL	635,250	239,841	0	115,937	355,778	279,472
					EIRR	12.05%

PART V DRAWING UP OF FIFTH FIVE YEAR PLAN

PART V DRAWING UP OF FIFTH FIVE YEAR PLAN

In line with the above-mentioned policy of the Reviewed Long-term Plan, the subject for the Fifth Five Year Development Plan was selected in accordance with following priority.

- No.1 : Rehabilitation of Facilities
- No.2 : Establishment of Maintenance System
- No.3 : Upgrading of Broadcasting Programmes
- No.4 : Improvement of the Broadcasting Network

1-1 Pick-up Items

- (1) Establishment of Maintenance System
- (2) Overhaul and Rehabilitation of MW Transmitting Stations
- (3) Rehabilitation and Up-grading of Radio Studios
- (4) Rehabilitation of TV Transmitters
- (5) Establishment of the Up-stream programme transmission line for TVN-I
- (6) Improvement of the Radio Programme Transmission Line
- (7) Improvement of the Engineering Communication Network
- (8) Expansion of the MW Radio Broadcasting Network
- (9) Enlargement of MW Transmitting Facilities

1-2 Drawing up of Fifth Five Year Plan

Within the pick-up items, following three alternatives were drawn up considering the points of construction cost, operation cost and so on.

And as a result of a series of discussion with Indonesian officials concerned, Alternative No.1 was selected as the Project for Fifth Five Year Development Plan.

1-2-1 Plan No. 1: Rehabilitation and Reinforcement of Broadcasting

(1) Objectives

A system to restore the functions of facilities and to maintain such functions will be established. The Plan also aims at enhancing the quality of programmes, expanding a stable medium-wave broadcasting network and eventually achieving sound management and operation in broadcasting that focuses on audience servicing.

(2) Contents of the Plan

1) Rehabilitation of Eight High-power Radio Stations

At the eight medium-wave radio transmitting stations installed under J-10 and M-2, viz., Jakarta, Medan, Banjarmasin, Ujung Pandang, Pekanbaru, Palembang, Surabaya and Semarang, the transmitters, antenna system and power-source system will be overhauled so as to restore their functions.

2) Rehabilitation of Five TV Transmitting Stations

The superannuated transmitters at the five TV transmitting stations, viz., Bandar Baru (Medan), Ujung Pandang, G. Muncung, G. Mangkol and G. Tajam, will be renewed and, at the same time, overhauls will be conducted for the power-source and antenna systems.

3) Establishment of Maintenance System (Jakarta + two bases)

In order to conduct thoroughgoing management of facilities, a computer system will be introduced into the Jakarta Engineering Centre and, at the same time, a workshop will be set up and be provided with measuring instruments, substitute equipment and spare parts. Further, as the first step, a regional engineering centres, which also function as a maintenance base, will be established at each of the Medan and Ujung Pandang and will be provided with necessary equipment.

4) Construction of Engineering Communication Network (between Jakarta and all regional radio stations and 50 regional TV stations)

An engineering communication network will be constructed and a facsimile communication system will be installed so as to enable sending and receiving of messages by fax.

5) Construction of TV Up-links (two stations)

In order to transmit the programmes produced in the regional stations to Jakarta, mobile-type up-links will be installed.

6) The programme transmission lines for RN-I will be improved into those of 10kHz in frequency band. Also, for RN-II programme transmission between Jakarta and Ujung Pandang, and for the overseas programme transmission between Jakarta and Medan/Biak, the down-stream lines of 5kHz bandwidth will be improved. Further, for RN-III, the stereophonic transmission line will be improved between Jakarta and 6 regional stations.

7) Additional Construction of Medium-wave Facilities at Shortwave-only Stations (5 stations)

A medium-wave transmitter will be installed at each of the stations in Fak-Fak, Ternate, Sorong, Palangkaraya and Bukittinggi.

8) Rehabilitation of Regional Radio Studios (4 stations)

Of the five stations mentioned in 7) above, four stations excluding Palangkaraya will have new installations or improvements made concerning studio equipment, master control equipment and FM transmitters and receivers which will also serve as an STL.

(3) The Reasons Why Contents of the Plan and the Particular Stations Have Been Selected as the Subjects.

1) Rehabilitation of Eight High-power Radio Stations

- As the time of planned replacement of equipment, passage of "15 years" will be used as a measure. In the case of radio transmitters, the number was found to total 122 sets when those 15 years old or older were picked out and counted.

- Of these 122, it is proposed that the short-wave transmitters should in principle be discarded, as they are not included in the equipment to be renewed.
- Of the 122 sets, 15 are medium-wave transmitters. However, some of them are scheduled to be replaced with new ones under other projects, while the others are no longer necessary because main equipment have already been installed in the station concerned. From the point of view of functions, these medium-wave transmitters are considered as being old enough to be discarded; no need of renewal is felt with regard to them.
- As a result of the site survey, it was found that, among those equipment 12-13 years old, there were a prominent number of broken-down units and listed up the medium-wave transmitters 10 years old or older. The result was a list of 62 sets of such transmitters.
- From this list, we excluded those which were due to be rehabilitated under another project or those whose functions had been reduced low enough to justify abolition. As a result, we obtained a list of the following eight stations:
 Jakarta (150kW × 2), Medan (50kW × 2), Surabaya (50kW × 2), Banjarmasin (25kW × 2), Ujung Pandang (50kW×2), Pekanbaru (25kW×2), Palembang (25kW × 2), Semarang (10kW + 10kW)
- The above-listed eight stations are those established under J-10 and M-2 (Yen-loan projects) and the current conditions of these stations show that the majority of them are suffering from such problems as breakdowns and shortage of spare parts and are actually operating at only a half of their respective output. Therefore, all of these stations are considered as being in need of an overhaul.

2) Rehabilitation of Five TV Transmitting Stations

- When the transmitters 15 years old or older were picked out. the number totalled 11 sets.
- From this list, those which were due to be rehabilitated under another project were excluded. The result is the following list of five stations:

Medan (10kW), Ujung Pandang (10kW), G. Muncung (1kW), G. Mangkol (1kW) and G. Tajam (1kW).

3) Establishment of Maintenance System (Jakarta + two bases)

- No project can succeed unless the facilities allocated under that project are used properly and effectively.

For that purpose, there is the need of establishing a maintenance system as the first step.

- Since the establishment of maintenance system concerns every aspect of broadcasting including organization, finance and development-plans, it is of utmost importance to first envisage the ultimate form of the maintenance system and then to consolidate the system in stages.

- In order to ensure smooth running of the maintenance work, the headquarters should be set up in Jakarta and the establishment of the bases at the following six locations should be planned, taking into account the number of radio and TV stations within the area and the convenience of transportation to each of those stations:

Medan, Ujung Pandang, Surabaya, Palembang, Banjarmasin and Jayapura.

- Of the six stations mentioned above, Medan and Ujung Pandang will be designated as the two regional maintenance bases in the first stage, taking into account such factors as the access geographical location and the number of stations under jurisdiction.

4) Construction of Engineering Communication Network (between Jakarta and all regional radio and 50 regional TV stations)

- In order to ensure smooth running of communication among broadcasting stations concerning all aspects of work including contacts on technical matters such as maintenance work, contacts about programme transmission, programming, material-gathering and sending of scripts, there is the need of maintaining an engineering communication network between the broadcasting stations for exclusive communication use.

- Use of the subscription telephone system is thinkable but for the broadcasting system that maintains a network of bases throughout Indonesia, the existing telephone system is inadequate and it definitely needs a network of telephone lines for exclusive use.

5) Construction of TV Up-links (two stations)

- In order to enable the broadcasting system to give full play to its special characteristic of instantaneity through the broadcasting of news or live coverage of events, and also to facilitate the introduction of the 'conference system,' there is the need of installing a mobile-type up-link at each of the following nine stations which currently have a studio, and also of installing a receiving station at the Jakarta station to receive signals coming from those nine stations:
Medan, Surabaya, Ujung Pandang, Palembang, Samarinda, Bandung, Yogyakarta, Denpasar and Manado.
- As a result of installation of these up-links, the sending of programme materials from those regional stations to Jakarta will become much faster than now when programme materials are sent in videotapes.
- Taking into account the programme-producing ability and the frequency of local events, and also considering such other factors as road conditions, up-links will be installed at the two stations in Surabaya and Medan before any other station.

6) Broadening the Bandwidth of Radio Programme Transmission Lines

- In order to improve the sound quality of radio broadcast signals, it is necessary to broaden the band of the programme transmission lines.
- This measure will be taken at all radio stations.

7) Additional Construction of Medium-wave Facilities at Shortwave-only Stations (5 stations)

- Shortwave broadcasting, which is accompanied by variations in receiving electric field according to time of the day and to the season, cannot be expected to offer stable service. Therefore, there is the need of a shift from shortwave broadcasting to medium-wave broadcasting.
- At present, there are 12 shortwave-only radio stations, of which two are already scheduled to have a medium-wave transmitter installed under another project.
- Of the remaining ten stations, five will be excluded as subjects of this construction plan, since their frequencies are still unregistered.

8) Rehabilitation of the Studios at the Regional Radio Stations (4 stations)

- At 48 regional radio stations, the superannuation of studios are so advanced that they require rehabilitations.
- Of the above-mentioned 48 stations, 26 are scheduled under another project to have their studios rehabilitated.
- Of the remaining 22 stations, the shortwave-only stations at which additional construction of medium-wave facilities is scheduled to be conducted will also have their studios rehabilitated and each of the stations will be improved as an integral system.

However, the Palankaraya station will be excluded as a subject of rehabilitation, since this station is due to be rehabilitated under another project.

1-2-2 Plan No. 2: Rehabilitation and Improvement of Broadcasting

(1) Objectives

To achieve sound management and operation of broadcasting services centring on audience servicing, by restoring the functions of facilities,

reinforcing the system for maintaining such functions and further improving the quality of programmes.

(2) Contents of the Plan

1) Rehabilitation of Eight High-power Radio Stations

At the eight medium-wave radio transmitting stations installed under J-10 and M-2 projects, viz., Jakarta, Medan, Banjarmasin, Ujung Pandang, Pekanbaru, Palembang, Surabaya and Semarang, the transmitters, antenna system and power-source system will be overhauled so as to restore their functions.

2) Rehabilitation of Five TV Transmitting Stations

The superannuated transmitters at the five TV transmitting stations, viz., Bandar Baru (Medan), Ujung Pandang, G. Muncung, G. Mangkol and G. Tajam, will be renewed and, at the same time, overhauls will be conducted for the power-source and antenna systems.

3) Establishment of a Maintenance System (Jakarta + two bases)

In order to conduct thoroughgoing management of facilities, a computer system will be introduced into the Jakarta Engineering Centre, and a workshop will be set up, equipped with measuring instruments, substitute equipment and spare parts. Further, as the first step, a regional base will be set up at each of the Medan and Ujung Pandang stations, equipped with necessary instruments and spare parts.

4) Construction of Engineering Communication Network (between Jakarta and the regional radio and TV stations)

An engineering communication network will be constructed and a facsimile communication system will be installed so as to enable sending and receiving of messages by fax.

5) Construction of TV Up-links (two stations)

In order to transmit the regionally-produced programmes to Jakarta, a mobile-type up-link will be installed.

6) Broadening of the Bandwidth of Radio Programme Transmission Lines
The programme transmission lines for RN-I will be improved into those of 10kHz in frequency band. Also, for RN-II programme transmission between Jakarta and Ujung Pandang, and for the overseas programme transmission between Jakarta and Medan/Biak, the downstream lines of 5kHz bandwidth will be improved. Further, for RN-III, the stereophonic transmission line will be improved between Jakarta and 6 regional stations.

(3) The Reasons Why Contents of the Plan and the Particular Stations have been Selected as the Subjects

1) Following the order of priority and in view of the fact that the present project is one that concerns expansion of the broadcasting network, the plan of constructing medium-wave facilities additionally to shortwave-only stations has been excluded from the Plan No.1.

2) Accordingly, the related plans for rehabilitation of studios have also been excluded as subjects of this Plan No.2.

1-2-3 Plan No. 3: Rehabilitation and Improvement of Broadcasting

(1) Objectives

To achieve sound management and operation of broadcasting services by restoring the functions of facilities and reinforcing the system for maintaining such functions.

(2) Contents of the Plan

1) Rehabilitation of Eight High-power Radio Stations

At the eight medium-wave radio transmitting stations installed under J-10 and M-2 projects, viz., Jakarta Medan, Banjarmasin, Ujung Pandang, Pekanbaru, Palembang, Surabaya and Semarang, the transmitters, antenna system and power-source system will be overhauled so as to restore their functions.

2) Rehabilitation of Five TV Transmitting Stations

The superannuated transmitters at the five TV transmitting stations, viz., Bandar Baru (Medan), Ujung Pnadang, G. Muncung, G. Mangkol and G. Tajam, will be renewed and, at the same time, overhauls will be conducted for the power-source and antenna systems.

3) Establishment of a Maintenance System (Jakarta + two bases)

In order to conduct thoroughgoing management of facilities, a computer system will be introduced into the Engineering Centre in Jakarta, and a workshop will be set up, equipped with measuring instruments, substitute equipment, and spare parts. Further, as the first step, a regional base will be set up at each of the Medan and Ujung Pandang stations, each equipped with necessary instruments and spare parts.

4) Construction of an Engineering Communication Network (between Jakarta and the regional radio and TV stations)

An engineering communication network will be constructed and a facsimile system will be installed so as to enable sending and receiving of messages by fax.

(3) The Reasons Why Contents of the Plan and the Particular Stations have been Selected as Subjects

1) Following the order of priority, the items concerning expansion of broadcasting networks and regarding programme transmission lines have been excluded from the Plan No.1.

2) This project aims at conducting the urgently-required rehabilitation of facilities and at establishing a maintenance system which is indispensable for keeping the broadcasting system in good condition.

Thus, the two purposes can be expected to bring forth synergistic effects and therefore, the two are inseparable.

PART VI CONCLUSION AND RECOMMENDATIONS

PART VI CONCLUSION AND RECOMMENDATIONS

CHAPTER 1 Evaluation

1-1 The Roles of Broadcasting

The Republic of Indonesia, which has shifted the target for its long-term national development plan from dependence on agriculture to promotion of industrialization, currently aims at achieving a spectacular transition into a modern state by the year 2000 through its self-sustained effort. Above all, Indonesia considers it most important to develop human resources in order to have the people with high caliber become the driving power for national development.

In playing the roles assigned to them to contribute to the promotion of national development, the mass media consider it their goals to spread information, education and culture to all the people of Indonesia; to enhance and uplevel the National Ideals and Unity in Diversity among all the people; and to support and contribute to the National Development Plan.

Compared with the print media such as newspapers and magazines and also with cinema and images of AV tapes and other types of mass media, the broadcasting possesses the characteristics of being able to convey information of much higher quality in by far the greater volume, instantaneously over a wide area. Broadcasting, moreover, is a very economical mass communication medium, as it enables the listeners/viewers to receive its services with receiving sets that are relatively cheap. In a vast island country like Indonesia, populated by a large number of multi-racial people, no better means of conveying information is conceivable.

In order to play such roles effectively, the Government of Indonesia has over the years made great endeavours to expand the radio and TV broadcasting services. As a result, the broadcasting services have been proving extremely effective in the enhancement of people's cultural and educational levels and of living standards, especially in the spreading of

Indonesian as the single national language, one of the goals of national importance ever since the nation's independence.

Today, Indonesia's national broadcasting services are confronted by many difficult problems to be solved. In order that the broadcasting may carry out the mission assigned to it, it is most essential for the broadcasting organizations to deliver services of richer content and higher quality in such a way that they can be enjoyed fully by the people throughout the country. And at the same time, the broadcasting organizations should continue to be the kind of entities that deserve high trust and support of the people.

1-2 Effects That Can be Expected as a Result of Implementation of the Long-term Plan

In reviewing the Long-term Plan during the periods of Repelita V and VI, various hardware and software projects have been planned with the following as the goals; ①restoration and maintenance of broadcasting functions, ②qualitative and quantitative improvement and enrichment of broadcast programmes and ③achievement of efficient management and financial stability through integration of radio and TV.

When these projects are carried out smoothly, the following effects may be expected to be achieved:

1-2-1 Enhancement of Broadcasting Services through the Restoration and Stabilization of Broadcasting Functions and Establishment of a Maintenance System

(1) By rehabilitation of the superannuated studio facilities at 48 regional radio stations as well as the radio studios in the broadcasting house in Jakarta, substantial improvement and expansion in radio programming can be achieved. Also, through the improvement of programme transmission lines, the quality of radio programmes at regional broadcasting stations will be improved.

(2) In TV broadcasting, the restoration and expansion of functions of studios at the Jakarta central station and seven regional stations will be carried out. In addition, various programme-production

functions including those of ENG equipment and OB vans will also be improved. Furthermore, the mobile-type TV up-links will be constructed so that live broadcasts and programme-material transmissions may become feasible from regional stations as well. As a result, the TV programmes at the main central and regional cities will be improved both in quality and quantity.

- (3) In both radio and TV, through the rehabilitation of the superannuated transmitting facilities at main stations across the country, the restoration and improvement of radiowave transmitting functions will be made, resulting in the recovery of radiowave transmission services from failures and in the achievement of high-quality and stable broadcasting services.
- (4) Establishment of the maintenance system through the setting up of maintenance bases is expected to result in prevention of failures of broadcasting facilities and maintenance of high quality of broadcasting services.

1-2-2 Expansion of Broadcasting Networks

- (1) As a result of establishment of the high-power shortwave transmitting stations, the RN-I and RN-II radio networks will achieve a 100% nationwide coverage, even though the stability may be lacking as compared with medium-wave broadcasts. Also, on RN-III, FM network will be starting to operate in Jakarta and six regional cities.
- (2) In addition to the above, the work will be carried on to construct TV relay stations as well as stable medium-wave radio stations in regions where the broadcasting services do not as yet reach, in response to the desire of the local residents.
- (3) As to the overseas broadcasting service using shortwave, the system will be vastly reinforced by the construction of high-power shortwave transmitting stations.

1-2-3 Improvement of Broadcasting Services through Improvement of Programmes

- (1) In parallel with the restoration and expansion of functions of facilities as mentioned above and making effective use of the results of such restoration and expansion, it becomes possible to carry out extensive qualitative and quantitative improvements in the entire range of radio and TV programming.

As for radio, programming will be newly started on RN-II (education) and RN-III (entertainment).

As for TV, the expansion of the broadcasting services can be brought about by increasing the broadcasting hours on the existing channel.

- (2) As for educational programmes and news, a committee will be formed through cooperation of those concerned within and outside the organization. This committee will establish a set-up to ensure systematic educational-programme production and news coverage, thus enabling high-grade broadcasting services that respond fully to the needs of broadcast audience.

1-2-4 Improvement of Organization and Management

- (1) The two separate radio and TV organization of hitherto will be completely integrated by the end of the Repelita VI, thus enabling more efficient and dynamic organization management. And through this integration, it is expected that an organization possessing greater vitality will be created as a result of a series of improvements including enhancements of treatment and abilities of personnel working there.

- (2) Stabilization and improvement of the organization's finance will be made possible through the improvement of the system of TV license-fee collection and revision of the license-fee rate.

- (3) By improving and reinforcing the audience-servicing system, a broadcasting organization fully trusted by the audience can be expected to be developed.

1-3 Reinforcement of the Organization's Foundation for Tomorrow

As a result of smooth implementation of the various projects mentioned herein that extend over the periods of Repelita V and VI, the foundation of the radio and TV broadcasting entity as the national broadcasting organization will be reinforced and a system capable of conducting stable and ample broadcasting services will be achieved. And based on such a well-established system, Indonesia's broadcasting can be expected to take another great leap forward toward its ultimate goals set for the year 2000 and beyond.

CHAPTER 2 Recommendation from Aspects of Development Plan

2-1 Securing and Expansion of Servicing System

The main purpose of the development plan proposed as a result of this study is to prevent the lowering of functions in the servicing system caused by the deterioration of the existing facilities for broadcasting services. If the already deteriorated facilities or facilities that will be certainly deteriorated in the future are renovated by rehabilitation and a proper maintenance system, substantial service system will be secured at a certain level originally intended.

This basic concept for the development of the broadcasting sector would obtain national consensus, and this concept accords with the national development policies in Indonesia.

On the other hand, it is necessary to establish and expand a servicing system to eliminate unserved areas by broadcasts and to improve broadcasting programmes qualitywise and quantitywise, for the sake of the broadcasting service forced by the national development policies within the feasible development budget.

2-2 Review of Development Budget

The existing long-term plan in 1984 proposed the investment amount of about Rp. 887 billion at the constant price of 1984 which is converted to about Rp. 1,403 billion at the constant price of 1989. It is impossible to invest such a huge amount in the broadcasting sector only, if the present economic situations in Indonesia are considered.

Therefore this study reviewed and newly proposed feasible investment scale amounting to about Rp. 683 billion which is about a half of the investment scale planned in 1984.

However, the proposed amount is accumulated close to the upper limitation (Rp. 715 billion). If the total national development budget is decreased due to change in economic situation in the future, the

development budget that will be allocated to RTF is inevitably decreased, as in the case occurred in Repelita IV.

2-3 Future Necessity of the Review of the Plan

This "Review of the Long-term Plan" is for the Replita V and VI period which is 10 years. However, there will be unforeseen changes in broadcasting technology due to drastic development of electronics, and in economic/social environment in Indonesia. Meanwhile, "New Media," such as Sound Multiplexed Television, Teletext, and DBS (Direct Broadcasting Satellite), are now coming into operation in advanced countries. Also in Indonesia, viewers/listeners' need for New Media will grow up. It will be necessary for RRI/TVRI to review the Plan whenever necessary and make it the most feasible one, considering those technological and social changes.

CHAPTER 3 Recommendation from Aspects of Organization, Management

3-1 Organization and Management

3-1-1 Realization of Long-term Plan

Since the existing long-term plan formulated in 1984 was made only conceptual, the present issues and problems have been cleared up in the study in order to set up an integration plan aiming at its materialization in 1994, the concrete actions should be taken for the integration by RTF as an executing agency have been likewise clarified and a further realistic plan of the organization and management is then recommended, taking into account practically some important issues which will be expected to happen when the integration is established.

As explicated before, there are still so many problems to be solved for the integration and, management and operation of its entity. As repeatedly emphasized in the study, it is impartiality in inducement and contribution that should be realized as a very vital issue. It is the most importance, therefore, to take steps for a gradual equalization in treatment of all the constituents of the organization under the circumstances of limited budgets.

Thus, it is indispensable for RTF to make a further effort in consultation and negotiation with the authorities concerned in order that the management of RTRI may become efficient.

3-1-2 Review of Agreement with POS & GIRO

In light of the present rate of TV lisencc-fee collection, it can hardly be said that the activities of Pos & Giro are sufficient.

As it is premised that the enterprise scheme of RTRI rests on the increment of lisencc-fee collection rates, reliability of securing funds is sure to be fatally influential on a sound management and operation of the enterprise. Although it is recommended for that reason in the study as one of the measures to transfer excess staff to the fee-collection working unit, it should also be examined as one of securing-fund measures to check afresh the 10% commission which Yayasan TV has paid to Pos & Giro.

For example, it can be considered to reduce the commission rate down to 5%, 3% and so on and/or to make its amount fixed.

3-1-3 Staff Assignment and Upgrading of Their Ability

It is necessary to assign the necessary number of staff in order to develop and promote effective operation. And also their ability in this field must be adequately high.

The number of staff for new projects planned in Repelita V & VI is estimated at 1866. And 1270 among 1866 shall be newly employed. To secure these staff having appropriate qualification and ability, RTF will have to negotiate with the authorities concerned.

Under the present recruit system of new employees, the Ministry of Manpower (DTK) allocates new recruited employees without considering their skills. Since news/programme and technical crews require special qualifications and ability, RTF will have to take necessary negotiation with the authorities concerned for improvement of the recruiting procedure.

For upgrading of employee's ability, improvement of the training system is needed. At present there are RRI-TC & TVRI-TC apart from MMTC. Since their capacity is too small, it must be remarkably increased. Also the methods of training should be improved. OJT (On-The-Job Training) and seminars must be added to the conventional schooling system so that time and sufficient training can be provided for as many staff as possible and motivation of self-study can be created.

3-2 Financial Planning of Enterprises

3-2-1 Revenue Sources

(1) Increasing TV License Fee

The revenue source of RTRI mainly consists of TV license fee from TV possessing households and the government subsidy. TV license fee accounts for the major part of the revenue source.

A financial plan is made on the condition that the average license fee is increased to 2 times the present tariff rate, and collection rate of license fee is increased to 63% on average in the whole Indonesia.

If preconditions as mentioned above might not be established for any reasons by the Indonesian side, RTRI's profitability would be decreased.

If this happens, RTRI will not be able to operate and manage enterprises themselves in the proper manner. It is, therefore, necessary to work out countermeasures against these unseen occasions in future. For instance, national consensus should be obtained to increase the license fee rate.

RTRI will make efforts to increase collection ratio of the license fee with close cooperation of POST & GIRO.

(2) Establishment of Routine Budget

Operation expenditures of RRI and EC are covered by a national subsidy under routine budget. If the planned routine budget would be cut down, public broadcasting services are diminished due to superannuation of the facilities, insufficient working condition, etc. Furthermore, the annual expenditure is sharply increased to 20% in 1990 compared with the average increasing rate of 10%. Thus, it is also important to manage enterprises by securing stable monetary fund which is determined under negotiation among RTF, RRI and higher authorities concerned.

(3) Further Study of Other Revenue Sources

At present, commercial fee by radio broadcast becomes an income of the national treasury. However, RTRI should study so that this fee becomes RTRI's revenue as a part of the revenue sources after RTRI is established.

3-2-2 Calculation of Depreciation

It is not necessary for RRI to calculate depreciation under the present regulation because of its being a national organization.

If RTRI would not calculate depreciation as internal reserve after its establishment, RTRI will not be able to invest fixed assets for the renewal of the superannuated facilities. It seems that the annual expenditure would be increased from the accounting viewpoint, it is,

however, essential to apply this accounting method for proper and permanent operation of broadcasting service.

CHAPTER 4 Recommendation from Aspects of Broadcasting Programme and Facilities

4-1 Broadcasting Programmes

4-1-1 Improvement of Broadcasting Programmes

In order to be trusted by viewers/listeners and to perform the roles and responsibilities imposed to broadcasting, the quantity and quality of broadcasting must be upgraded.

Improvement should be performed according to the following basic ideas:

- Broadcasting of useful programmes of rich contents that appeal to viewers/listeners
- Broadcasting of programmes dealing with regional traditions and culture by making effective use of the nationwide network
- Broadcasting of video and sound which are of high quality in terms of production and technical standard.

At the end of Repelita VI, production facilities and equipment will be remarkably improved by rehabilitation and enhancement of the facilities. The programme transmission system also will be expected to be equipped with high quality down-links for radio and up-links for TV. This improvement should be fully utilized to improve broadcasting programmes.

4-2 Broadcasting Facilities and Operation

4-2-1 Establishment of Appropriate Maintenance System

Among this plan, rehabilitation of facilities is the main part, then, a number of equipment will be newly installed. An appropriate maintenance system must be organised to ensure performance of the equipment without

any damage for a long time. Present situations of maintenance of radio/TV equipment are rather poor. To improve this, establishment of maintenance bases at 6 regional stations and within the Engineering Centre existing in Jakarta are planned in Repelita V & VI for comprehensive improvement of maintenance networks.

For proper operation of this new maintenance system and achievement of the best results, organising new management and operations, upgrading of staff ability and sufficient budget allocation for operation will be necessary.

Regarding staff ability, the upgrading of maintenance ability for individual equipment is important. However, ability to manage nationwide concept maintenance and ability to give instructions in maintenance technique to regional staff should be also stressed. Guidelines must be also established.

4-2-2 Quality control of broadcasting and its improvement

Broadcasting is a system which consists of the broadcasting side and the receiving side. The broadcasting side has programme production position and electro-magnetic wave portion while the receiving side has receivers.

In this system, products by broadcasting stations, i.e. broadcasting programmes must be sent to listners/viewers in excellent quality.

For this purpose, all the elements which cause quality deterioration such as technical impairment of audio/video signals, breakdown and misoperation. The study up to the transmitter in a broadcasting station must be eliminated.

There will be many factors to impair signal reception environment such as noise signals caused by vehicles, reflected by high-rising buildings, and signals coming-in from overseas.

In Indonesia, systematic surveys on receiving conditions at audience's home have never been reported. RRI and TVRI should conduct these surveys and make a plan to improve the situations. Based on the

results, action should be taken to improve receiving conditions in such ways as offering instructions to home users, reflecting the result to a construction plan of new stations and/or negotiations with the authorities concerned according to necessity.

4-2-3 Programme Transmission Line

In this Long-term Plan, the most feasible plan has been worked out in order to accommodate required transmission lines for both radio and television networks as well as engineering communication lines in most economical way in terms of leasing fee.

For improvement of the radio transmission line, the plan is made to contain four sound programme lines including a stereophonic line. As for TV, 2 sets of mobile-type TV Up-links are planned.

In order to realize these plans, employing of PERUMTEL facilities including Palapa transponders and modification of the ground facilities will be essential. Accordingly, it is very important to hold close consultation with PERUMTEL officials concerned for the following conditions prior to implementation of the plan:

- Solving interpretation of domestic regulation on operation of Palapa Satellite
- Operation of the facilities
- Ownership of the facilities
- Maintenance system of the transmission line and responsibility
- Leasing of transponders
- Improvement of Cibinong MSC Ground Station
- Network composition
- Leasing Fee

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