

Table L.3.1 Damages to Buildings and Movables by Scale of Flood in C Zone in Present Urbanized Situation

Zone	No.	District	Inundat- ed area (ha)	Unit damages (million VND/ha)		Damages (million VND) due to	
				1-year flood	10-year flood	1-year flood	10-year flood
C-Zone	C-4	District 1	34.31	158	166	5,421	5,695
		District 3	10.27	218	233	2,239	2,393
		District 4	30.08	200	216	6,016	6,497
		District 5	22.78	270	309	6,151	7,040
		District 6	0.00	227	242	0	0
		District 8	201.64	232	242	46,781	48,798
		District 10	13.20	223	249	2,943	3,287
		District 11	0.00	220	249	0	0
		Tan Binh	38.98	225	226	8,771	8,810
	Total	351.26	-	-	78,322	82,519	
	C-a	Binh Thanh	372.66	125	131	46,582	48,818
		Total	372.66	-	-	46,582	48,818
	C-b	Binh Thanh	22.15	125	131	2,769	2,902
		Total	22.15	-	-	2,769	2,902
Total of C-Zone			746.08	-	-	127,674	134,240

Table L.3.2 Distribution of Inundated Area in Future Urbanized Situation

Zone	No.	District	Total inundated area (ha)	Built-up inundated Area		Agricultural inundated area		
				Present (ha)	Future (ha)	Present (ha)	Future (ha)	
C-Zone	C-4	District 1		34.31				
		District 3		10.27				
		District 4		30.08				
		District 5		22.78				
		District 6		0.00				
		District 8		201.64				
		District 10		13.20				
		District 11		0.00				
		Tan Binh		38.98				
		Total		1,273.06	351.26	812.16	921.80	460.90
	C-a	Binh Thanh			372.66			
		Total		372.66	372.66			
	C-b	Binh Thanh			22.15			
Total			22.15	22.15				
Total of C-Zone			1,667.88	746.08	1,206.98	921.80	460.90	

Table L.3.3 Damages to Buildings and Movables by Scale of Flood in C Zone in Future Urbanized Situation

(Note) * : Future urbanized area.

Zone	No.	District	Inundat- ed area (ha)	Unit damages (million VND/ha)		Damages (million VND) due to	
				1-year flood	10-year flood	1-year flood	10-year flood
C-Zone	C-4	District 1	34.31	158	166	5,421	5,695
		District 3	10.27	218	233	2,239	2,393
		District 4	30.08	200	216	6,016	6,497
		District 5	22.78	270	309	6,151	7,040
		District 6	0.00	227	242	0	0
		District 8	201.64	232	242	46,781	48,798
		District 10	13.20	223	249	2,943	3,287
		District 11	0.00	220	249	0	0
		Tan Binh	38.98	158	158	6,159	6,159
		FUA*	460.90	165	174	76,049	80,197
	Total	812.16	-	-	151,759	160,065	
	C-a	Binh Thanh	372.66	125	131	46,582	48,818
		Total	372.66	-	-	46,582	48,818
C-b	Binh Thanh	22.15	125	131	2,769	2,902	
	Total	22.15	-	-	2,769	2,902	
Total of C-Zone			1,206.98	-	-	201,110	211,785

Table L.3.4 Average Annual Damages to Buildings and Movables in C Zone

Urbanized situation	Return period	Probability of exceedance	Annual probability	Damages in each return period (mil.VND)	Average amount of assumed damages (mil.VND)	Average annual damages (mil.VND)	Cumulative total of average annual damages (mil.VND)
In Present Urbanized Situation							
	1	1.00000	-	127,674	-	-	-
	10	0.10000	0.90000	134,674	131,174	118,057	118,057
In Future Urbanized Situation							
	1	1.00000	-	201,110	-	-	-
	10	0.10000	0.90000	211,785	206,448	185,803	185,803

Table L.3.5 Annual Average Damages to Public Facilities in C Zone

Urbanized situation	Total inundated area (built-up area) (ha)	Area of inundated public facilities (ha)	Annual average damages (million VND)
In Present Urbanized Situation			
	746.08	326.56	1,143
In Future Urbanized Situation			
Present	746.08	326.56	1,143
Future	460.90	298.76	1,046
Total	1,206.98	625.31	2,189
(Remarks)			
In Present Urbanized Situation:			
1.	Building density:	56.2%	
2.	Unit damages:	3,500 (VND1,000/ha)	
In Future Urbanized Situation:			
1.	Building density:	56.2% (at present) 35.2% (in future)	
2.	Unit damages:	3,500 (VND1,000/ha)	

Table L.3.6 Summary of Average Annual Direct Damages in C Zone

Kind of direct damages	In Vietnamese Dong (million VND)	
	At present	In future(by Project)
Buildings and movables	118,057	185,803
Public facilities	1,143	2,189
Agricultural crops (paddy)	514	257
Total	119,714	188,249

Table L.3.7 Number of Households Engaging in Trading and Services in C Zone

No.	District	Inundat- ed area (ha)	Flood vulnerable population			Total number of households (HH)			Share rate (%)	Number of HHs engag- ing in trading & services		
			1997	2010	2020	1997	2010	2020		1997	2010	2020
C-4	District 1	34.31	24,423	23,556	22,915	4,277	4,125	4,013	47%	2,002	1,931	1,879
	District 3	10.27	9,610	9,286	9,045	1,683	1,626	1,584	66%	1,111	1,073	1,045
	District 4	30.08	19,659	19,432	19,265	3,443	3,403	3,374	82%	2,835	2,802	2,778
	District 5	22.78	15,214	14,096	13,301	2,664	2,469	2,329	67%	1,776	1,646	1,553
	District 6	0.00	0	0	0	0	0	0	48%	0	0	0
	District 8	201.64	77,393	68,441	62,973	13,554	11,986	11,029	59%	8,040	7,110	6,542
	District 10	13.20	6,750	6,731	6,717	1,182	1,179	1,176	44%	523	522	521
	District 11	0.00	0	0	0	0	0	0	59%	0	0	0
	Tan Binh	38.98	19,098	19,787	20,335	3,345	3,465	3,561	47%	1,564	1,621	1,666
	Total	351.26	172,147	161,330	154,550	30,148	28,254	27,067		17,852	16,706	15,984
C-a	Binh Thanh	372.66	9,828	13,794	18,934	1,721	2,416	3,316	69%	1,183	1,661	2,280
	Total	372.66	9,828	13,794	18,934	1,721	2,416	3,316		1,183	1,661	2,280
C-b	Binh Thanh	22.15	2,880	3,382	3,828	504	592	670	69%	347	407	461
	Total	22.15	2,880	3,382	3,828	504	592	670		347	407	461
Total of C-Zone		746.08	184,855	178,506	177,312	32,374	31,262	31,053		19,382	18,774	18,724

(Note) Average family size : 5.71 (persons/HH)

Table L.3.8 Business Suspension Losses in C Zone

Zone	No.	Number of households engaging in trading and services			Increasing ratio (% per annum)		Average flood duration (hours)	Business suspension days (days)	Annual average damages due to business suspension (million VNĐ)			Annual average damages due to business suspension (equivalent to 1,000 US\$)				
		1997	2010	2020	From 1997 to 2010	From 2010 to 2020			1997	1998	2010	2020	1997	1998	2010	2020
C-Zone	C.4	17,852	16,706	15,984	-0.51%	-0.44%	6.1	1.0	16,534	16,450	15,473	14,804	1,185	1,179	1,109	1,061
	C.a	1,183	1,661	2,280	2.64%	3.22%	4.0	1.0	1,096	1,125	1,538	2,112	79	81	110	151
	C.b	347	407	461	1.23%	1.25%	3.1	1.0	321	325	377	427	23	23	27	31
	Total	19,382	18,774	18,725	-0.24%	-0.03%			17,951	17,900	17,388	17,342	1,286	1,283	1,246	1,243

Remarks : Unit losses = 926,165 (VNĐ/HH.day as of 1998). Based on the statistical data shown in Table K.1.11.

Exchange rate : US\$1.00 = VNĐ13,956 (mid-rate as of the end of July, 1998).

Table L.3.9 Income Losses in C Zone

Zone	Catchment area	Flood Vulnerable Population						Suspension days				Annual average income losses					
		Built-up Area		Increasing ratio (%)		Agricultural Land		Increasing ratio (%)		Tranding services		Agr-culture		Built-up area(mil.VND)		Agricultural area(mil.VND)	
		1997	2020	1997	2020	1997	2020	1997	2020	1998	2020	1998	2020	1998	2020	1998	2020
C-Zone	C.4	15,214	13,301	-0.38%	19,723	67,070	5.47%	34,937	80,371	1.0	1.0	226	199	212	682		
	C.a	9,839	18,947	2.89%	0	0	0	9,839	18,947	1.0	1.0	152	284				
	C.b	2,880	3,826	1.24%	0	0	0	2,880	3,826	1.0	1.0	44	57				
	Total	27,933	36,074	1.12%	19,723	67,070	5.47%	47,656	103,144			422	540	212	682		

Remarks : 1. Daily income per person for workers: 40,320 (VND/day, person as of 1998. Based on the data shown in Table K.1.11).
 2. Daily income per person for farmers: 27,405 (VND/day, person as of 1998, see below).

Calculation :	Item	Gross output (ml.VND)	Nos. of farmers (persons)	Daily income (VND/day)
	1994	1,281	248,164	17,213
	1995	1,620	238,893	22,607
	1996	1,738	254,725	22,741
	1997	1,863	246,797	25,163
	1998	1,989	241,981	27,405

Source: Statistical Yearbook of Ho Chi Minh City, 1998.

- 3. Average family size : 5.71 (persons/FH, see Table K.2.19).
- 4. Number of working persons per HH : 2.12 (persons/FH, see Table K.2.19).

Source : See Table E.5.3 for "Flood Vulnerable Population".

Table L.3.10 Saving Amount of Medical Fees in C Zone

Catchment area	Flood Vulnerable Population		Number of total patients suffered by water borne disease		Amount of medical fees for total patients suffered by water borne d. disease		Number of outpatients suffered by water borne disease		Amount of income to be received during visiting days to hospitals		Number of inpatients suffered by water borne disease		Amount of income to be received during staying days in hospitals			
	1997	1998	2020	1998	2020	1998	2020	1998	2020	1998	2020	1998	2020	1998	2020	
	No.			(persons)	(million VNĐ)	(persons)	(million VNĐ)	(persons)	(million VNĐ)	(persons)	(million VNĐ)	(persons)	(million VNĐ)	(persons)	(million VNĐ)	
			Increase- ing ratio (%)													
In Built-up Area																
C.4	15,214	15,125	13,301	-0.58%	279	245	93	82	141	124	75	66	138	122	44	39
C.a	9,839	10,123	18,947	2.89%	187	350	63	117	94	176	50	94	93	173	30	55
C.b	2,880	2,916	3,826	1.24%	54	71	18	24	27	36	15	19	27	35	9	11
Total	27,933	28,164	36,074	1.12%	520	666	174	223	262	336	140	180	257	330	82	106
In Agricultural Area																
C.4	19,723	20,801	67,070	5.47%	384	1,237	129	414	194	625	70	227	190	613	41	134
C.a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C.b	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	19,723	20,801	67,070	5.47%	384	1,237	129	414	194	625	70	227	190	613	41	134

Note: Total population in HCMC: 4,989,703 (As of 1997, Statistical Yearbook of Ho Chi Minh City, 1998)

Annual average outpatients: 548,868 (See Table K.2.2.1)
 Annual average inpatients: 538,570 (See Table K.2.2.1)
 Total patients: 1,087,438
 Share rate of water borne diseases: 28.22% (See Table K.2.2.1)
 Total medical cost: 364,150 (million VNĐ, see Table K.2.2.1)
 Medical cost per patient: 334,870 (VNĐ/patient)
 Average daily income for workers: 40,320 (VNĐ/patient, see Table K.2.2.0)
 Average daily income for farmers: 27,405 (VNĐ/patient, see Table K.2.2.0)
 Average days staying in hospital: 7.95 (days/inpatient, see Table K.2.2.1)
 Average days to visit to hospital: 13.28 (days/outpatient, see Table K.2.2.1)
 Estimation of impact of the Project: 30% (Assumed)

Table L.3.11 Summary of Indirect Benefit in C Zone

Item	In million VNĐ					
	Built-up area		Agricultural area		Total	
	1998	2020	1998	2020	1998	2020
Income loss due to inundation	422	540	212	682	634	1,222
Saving amount of medical fees and incomes	396	509	240	775	636	1,284
Saving amount of medical fees	174	223	129	414	303	637
Income losses for outpatients	140	180	70	227	210	407
Income losses for inpatients	82	106	41	134	123	240
Navigator benefit					10,789	18,157
Total	818	1,049	452	1,457	12,059	20,663

Table L.3.12 Annual Disbursement of Construction Cost and Estimation of Its Economic Cost in C-Zone

Cost item	Distribution												Total in 1st Phase		Total in 2nd Phase			
	2000		2001		2002		2003		2004		2005		FC	I.C	Total	FC	I.C	Total
	FC	I.C	Sub-total	FC	I.C	Sub-total	FC	I.C	Sub-total	FC	I.C	Sub-total						
Construction works	25.1	58.7	83.8	41.9	97.8	139.7	41.9	97.8	139.7	41.9	97.8	139.7	55.9	167.7	223.6	558.8		
Dredging equipment	13.7	5.9	19.6	2.7	1.2	3.9	2.7	1.2	3.9	2.7	1.2	3.9	3.9	27.4	11.7	39.1		
Engineering cost	0.0	144.4	144.4	0.0	54.2	54.2	0.0	54.2	54.2	0.0	54.2	54.2	0.0	0.0	0.0	361.1		
Compensation cost	13.7	150.3	164.0	27.9	114.0	141.9	44.7	153.1	197.8	44.7	153.1	197.8	59.8	195.0	764.0	959.1		
Sub-total	0.0	5.5	5.5	0.0	4.4	4.4	0.0	4.4	4.4	0.0	4.4	4.4	4.4	0.0	27.6	27.6		
Administration	13.7	155.8	169.5	27.9	118.4	146.3	44.7	157.6	202.2	44.7	157.6	202.2	64.2	181.3	635.8	817.1		
Sub-total	0.0	0.0	0.0	2.5	5.9	8.4	4.2	9.8	14.0	4.2	9.8	14.0	1.7	3.9	5.6	39.1		
Physical contd.	13.7	155.8	169.5	30.4	124.3	154.7	48.8	167.3	216.2	48.8	167.3	216.2	69.8	211.8	830.8	1,042.6		
Financial cost	12.3	153.6	165.9	27.4	104.4	131.8	44.0	134.5	178.4	44.0	134.5	178.4	54.3	190.6	696.6	887.2		
Economic cost																		

Cost item	Distribution												Total in 2nd Phase		Total in Whole Works			
	2005		2006		2007		2008		2009		2010		FC	I.C	Total	FC	I.C	Total
	FC	I.C	Sub-total	FC	I.C	Sub-total	FC	I.C	Sub-total	FC	I.C	Sub-total						
Construction works	10.5	29.4	39.9	53.2	134.2	187.4	52.8	130.6	183.4	27.1	70.6	97.7	0.0	0.0	0.0	296.3	691.3	987.6
Dredging equipment	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	0.0	0.0	42.4	26.7	69.1
Engineering cost	0.0	24.8	24.8	0.0	9.9	9.9	0.0	7.5	7.5	0.0	7.5	7.5	0.0	0.0	0.0	0.0	410.8	410.8
Compensation cost	10.5	29.4	39.9	53.2	134.2	187.4	52.8	130.6	183.4	27.1	70.6	97.7	143.6	364.8	508.4	338.7	1,128.8	1,467.5
Sub-total	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	0.0	0.0	0.0	42.0	42.0
Administration	10.5	32.9	43.4	53.2	137.8	191.0	52.8	134.2	187.0	27.1	74.2	101.3	133.1	346.2	479.3	314.5	982.0	1,296.5
Sub-total	0.0	0.0	0.0	5.1	12.0	17.1	2.6	6.0	8.6	0.0	0.0	0.0	12.9	30.0	42.9	29.6	69.1	98.8
Physical contd.	10.5	32.9	43.4	58.4	149.8	208.2	57.9	146.2	204.2	29.6	80.2	109.9	156.5	409.2	565.7	368.5	1,239.9	1,608.2
Financial cost	9.5	31.2	40.7	52.6	108.4	160.9	52.1	105.2	157.4	26.7	59.1	85.8	140.8	304.0	444.8	331.5	1,000.5	1,332.0
Economic cost																		

(billion VND)

- Remarks:
- Price share rates of construction:
 - Labour: 0%
 - Equipment and Material: 30%
 - Tax: 10% for construction and engineering services.
 - Contractor's overhead & profit: 10%
 - Standard conversion factor: 0.9020 (Refer to Table X.2.26)
 - Shadow wage rate (economic wage rate): 70%
 - Price: As of October 1997.
 - Conversion rate: US\$ 1.00 = VND13,956 and US\$1.00 = VND113,39 as of the end of July, 1999.
8. Operation/maintenance and replacement cost:
- | Annualized work item | Phase 1 | Phase 2 | Total |
|-----------------------|---------|---------|-------|
| Labour cost | 2.0 | 0.0 | 2.0 |
| OM cost (newly Equip) | 4.7 | 0.0 | 4.7 |
| OM cost (Pumping) | 0.4 | 0.2 | 0.6 |
| Miscellaneous cost | 0.0 | 0.0 | 0.1 |
| Financial cost | 7.1 | 0.2 | 7.3 |
| Economic cost | 5.7 | 0.2 | 5.9 |
9. Replacement cost
- | Phase | Cost (billion VND) |
|-------------------------|--------------------|
| Phase-1 (F. cost:25.0): | 20.2 |
| Phase-2 (F. cost:27.0): | 21.8 |
10. Replacement cost for OM vehicles:
- | Phase | Cost (billion VND) |
|--------------------------|--------------------|
| Phase-1 (F. cost:36.92): | 36.9 |
| Phase-2 (F. cost:55.28): | 55.3 |

Table L.3.13 Calculation of Economic Internal Rate of Return for the Works of C-Zone

																(billion VND)		
Year in order	Year	Cost								Benefit					Cash balance			
		1st phase				2nd phase				Cost in total	Direct benefit	Indirect benefit				Total		
		Construction F.C.	L.C.	OM cost	Replace- ment C.	Sub- total	Construction F.C.	L.C.	OM cost			Replace- ment C.	Sub- total	Business			Income	Medic1
(Base year)											119.7	17.9	0.6	0.6	10.8			
1	1999	0.0	0.0	0.0		0.0				0.0	0.0					0.0	0.0	
2	2000	12.3	153.6	0.0		165.9				0.0	165.9					0.0	-165.9	
3	2001	27.4	104.4	0.0		131.8				0.0	131.8					0.0	-131.8	
4	2002	44.0	134.5	0.0		178.5				0.0	178.5	123.0	17.8	0.7	0.7	11.1	-25.2	
5	2003	44.0	134.5	0.0		178.5				0.0	178.5	126.4	17.8	0.7	0.7	11.5	-21.4	
6	2004	44.0	134.5	0.0		178.5				0.0	178.5	130.9	17.7	0.7	0.7	12.0	-16.5	
7	2005	19.1	35.2	0.0		54.3	9.5	31.2		40.7	95.0	136.5	17.6	0.8	0.8	12.5	73.2	
8	2006			7.1		7.1	52.6	108.4		161.0	168.1	140.3	17.6	0.8	0.8	13.0	4.3	
9	2007			7.1		7.1	52.1	105.2		157.3	164.4	143.3	17.5	0.8	0.8	13.3	11.4	
10	2008			7.1		7.1	26.7	59.1		85.8	92.9	146.4	17.5	0.8	0.9	13.6	86.3	
11	2009			7.1		7.1			0.2	0.2	7.3	149.7	17.4	0.9	0.9	13.9	175.5	
12	2010			7.1		7.1			0.2	0.2	7.3	153.0	17.4	0.9	0.9	14.3	179.2	
13	2011			7.1		7.1			0.2	0.2	7.3	156.4	17.4	0.9	1.0	14.7	183.1	
14	2012			7.1		7.1			0.2	0.2	7.3	159.7	17.4	1.0	1.0	15.0	186.7	
15	2013			7.1		7.1			0.2	0.2	7.3	163.0	17.4	1.0	1.0	15.4	190.5	
16	2014			7.1		7.1			0.2	0.2	7.3	166.4	17.4	1.0	1.1	15.8	194.3	
17	2015			7.1		7.1			0.2	0.2	7.3	169.8	17.4	1.1	1.1	16.1	198.2	
18	2016			7.1		7.1			0.2	0.2	7.3	173.4	17.4	1.1	1.1	16.5	202.2	
19	2017			7.1		7.1			0.2	0.2	7.3	177.0	17.4	1.1	1.2	16.9	206.2	
20	2018			7.1		7.1			0.2	0.2	7.3	180.7	17.4	1.2	1.2	17.3	210.4	
21	2019			7.1		7.1			0.2	0.2	7.3	184.4	17.3	1.2	1.2	17.7	214.6	
22	2020			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
23	2021			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
24	2022			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
25	2023			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
26	2024			7.1	47.0	54.1			0.2	0.2	54.3	188.2	17.3	1.2	1.3	18.2	172.0	
27	2025			7.1	10.1	17.2			0.2	0.2	17.4	188.2	17.3	1.2	1.3	18.2	208.9	
28	2026			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
29	2027			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
30	2028			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
31	2029			7.1		7.1			0.2	0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0	
32	2030			7.1		7.1			0.2	66.2	66.4	73.5	188.2	17.3	1.2	1.3	18.2	152.8
33	2031			7.1		7.1			0.2	10.9	11.1	18.2	188.2	17.3	1.2	1.3	18.2	208.1
34	2032			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
35	2033			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
36	2034			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
37	2035			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
38	2036			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
39	2037			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
40	2038			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
41	2039			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
42	2040			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
43	2041			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
44	2042			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
45	2043			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
46	2044			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
47	2045			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
48	2046			7.1	47.0	54.1			0.2		0.2	54.3	188.2	17.3	1.2	1.3	18.2	172.0
49	2047			7.1	10.1	17.2			0.2		0.2	17.4	188.2	17.3	1.2	1.3	18.2	208.9
50	2048			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
51	2049			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
52	2050			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
53	2051			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
54	2052			7.1		7.1			0.2	66.2	66.4	73.5	188.2	17.3	1.2	1.3	18.2	152.8
55	2053			7.1		7.1			0.2	10.9	11.1	18.2	188.2	17.3	1.2	1.3	18.2	208.1
56	2054			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
57	2055			7.1		7.1			0.2		0.2	7.3	188.2	17.3	1.2	1.3	18.2	219.0
Total		190.8	696.7	355.0	114.2	1,356.7	140.9	303.9	9.4	154.2	608.4	1,965.1				11,534.4	9,569.3	
In the condition of discount rate at 10%:																		
Not Present value (NPV):																		
Internal rate of return (EIRR):																		
B.C																		

Table L.3.14 Calculation of Financial Internal Rate of Return (FIRR) in Case of VND6,000/III.Month in C-Zone for Urban Drainage Works

Year in order	Year	Cost		Cost in total	Service Population in C Zone for FS level	III in total p/III	Benefit (revenue of OM charge (2.5%/annum))	Cash balance
		1st phase	2nd phase					
(base year)					1,287,065 as of 1997)		72,000	
1	1999	0.0	0.0	0.0			(VND)/III)	0.0
2	2000	165.9	0.0	165.9				-165.9
3	2001	131.8	0.0	131.8				-131.8
4	2002	178.5	0.0	178.5		0	0.0	-178.5
5	2003	178.5	0.0	178.5		0	0.0	-178.5
6	2004	178.5	0.0	178.5		0	0.0	-178.5
7	2005	54.3	40.7	95.0		0	0.0	-95.0
8	2006	7.1	161.0	168.1	1,293,773	226,580	20.4	-147.7
9	2007	7.1	157.3	164.4	1,294,614	226,727	20.9	-143.5
10	2008	7.1	85.8	92.9	1,295,455	226,875	21.4	-71.5
11	2009	7.1	0.2	7.3	1,296,297	227,022	22.0	14.7
12	2010	7.1	0.2	7.3	1,297,140	227,170	22.5	15.2
13	2011	7.1	0.2	7.3	1,297,983	227,318	23.1	15.8
14	2012	7.1	0.2	7.3	1,298,827	227,465	23.7	16.4
15	2013	7.1	0.2	7.3	1,299,671	227,613	24.3	17.0
16	2014	7.1	0.2	7.3	1,300,516	227,761	25.0	17.7
17	2015	7.1	0.2	7.3	1,301,361	227,909	25.6	18.3
18	2016	7.1	0.2	7.3	1,302,207	228,057	26.3	19.0
19	2017	7.1	0.2	7.3	1,303,053	228,206	26.9	19.6
20	2018	7.1	0.2	7.3	1,303,900	228,354	27.6	20.3
21	2019	7.1	0.2	7.3	1,304,748	228,502	28.3	21.0
22	2020	7.1	0.2	7.3	1,305,596	228,651	29.1	21.8
23	2021	7.1	0.2	7.3	1,305,596	228,651	29.8	22.5
24	2022	7.1	0.2	7.3	1,305,596	228,651	30.5	23.2
25	2023	7.1	0.2	7.3	1,305,596	228,651	31.3	24.0
26	2024	56.5	0.2	56.7	1,305,596	228,651	32.1	-24.7
27	2025	19.6	0.2	19.8	1,305,596	228,651	32.9	13.1
28	2026	7.1	0.2	7.3	1,305,596	228,651	33.7	26.4
29	2027	7.1	0.2	7.3	1,305,596	228,651	34.5	27.2
30	2028	7.1	0.2	7.3	1,305,596	228,651	35.4	28.1
31	2029	7.1	0.2	7.3	1,305,596	228,651	36.3	29.0
32	2030	7.1	69.0	76.1	1,305,596	228,651	37.2	-38.9
33	2031	7.1	13.7	20.8	1,305,596	228,651	38.1	17.3
34	2032	7.1	0.2	7.3	1,305,596	228,651	39.1	31.8
35	2033	7.1	0.2	7.3	1,305,596	228,651	40.0	32.7
36	2034	7.1	0.2	7.3	1,305,596	228,651	41.0	33.7
37	2035	7.1	0.2	7.3	1,305,596	228,651	42.1	34.8
38	2036	7.1	0.2	7.3	1,305,596	228,651	43.1	35.8
39	2037	7.1	0.2	7.3	1,305,596	228,651	44.2	36.9
40	2038	7.1	0.2	7.3	1,305,596	228,651	45.3	38.0
41	2039	7.1	0.2	7.3	1,305,596	228,651	46.4	39.1
42	2040	7.1	0.2	7.3	1,305,596	228,651	47.6	40.3
43	2041	7.1	0.2	7.3	1,305,596	228,651	48.8	41.5
44	2042	7.1	0.2	7.3	1,305,596	228,651	50.0	42.7
45	2043	7.1	0.2	7.3	1,305,596	228,651	51.3	44.0
46	2044	7.1	0.2	7.3	1,305,596	228,651	52.5	45.2
47	2045	7.1	0.2	7.3	1,305,596	228,651	53.9	46.6
48	2046	56.5	0.2	56.7	1,305,596	228,651	55.2	-1.5
49	2047	19.6	0.2	19.8	1,305,596	228,651	56.6	36.8
50	2048	7.1	0.2	7.3	1,305,596	228,651	58.0	50.7
51	2049	7.1	0.2	7.3	1,305,596	228,651	59.4	52.1
52	2050	7.1	0.2	7.3	1,305,596	228,651	60.9	53.6
53	2051	7.1	0.2	7.3	1,305,596	228,651	62.5	55.2
54	2052	7.1	69.0	76.1	1,305,596	228,651	64.0	-12.1
55	2053	7.1	13.7	20.8	1,305,596	228,651	65.6	44.8
56	2054	7.1	0.2	7.3	1,305,596	228,651	67.3	60.0
57	2055	7.1	0.2	7.3	1,305,596	228,651	68.9	61.6
Total		1,366.3	618.8	1,985.1			2,002.7	17.6
In the condition of discount rate at 10 %:								
Net Present value (NPV):				840.2			181.1	-704.2
Internal rate of return (EIRR):								0.04%
B/C								0.22

**Table L.3.15 Suitability of OM Charge for Urban
Drainage Facilities in Case of
VND1,000/III per Month Base**

Year in order	Year	OM and Replacement Cost			Service Population in C Zone for US level	III in total p/III	Benefit (revenue of OM charge (2.5%/annum) 12,000 (VND/III)	Cash balance
		1st phase	2nd phase	Cost in total				
	(Base year)				1,287,065 as of 1997)			
1	1999	0.0	0.0	0.0			0.0	0.0
2	2000	0.0	0.0	0.0			0.0	0.0
3	2001	0.0	0.0	0.0			0.0	0.0
4	2002	0.0	0.0	0.0		0	0.0	0.0
5	2003	0.0	0.0	0.0		0	0.0	0.0
6	2004	0.0	0.0	0.0		0	0.0	0.0
7	2005	0.0	0.0	0.0		0	0.0	0.0
8	2006	10.2	0.0	10.2	1,293,773	226,580	3.4	-6.8
9	2007	10.2	0.0	10.2	1,294,614	226,727	3.5	-6.7
10	2008	10.2	0.0	10.2	1,295,455	226,875	3.6	-6.6
11	2009	10.2	4.3	14.5	1,296,297	227,022	3.7	-10.8
12	2010	10.2	4.3	14.5	1,297,140	227,170	3.8	-10.8
13	2011	10.2	4.3	14.5	1,297,983	227,318	3.9	-10.7
14	2012	10.2	4.3	14.5	1,298,827	227,465	4.0	-10.6
15	2013	10.2	4.3	14.5	1,299,671	227,613	4.1	-10.5
16	2014	10.2	4.3	14.5	1,300,516	227,761	4.2	-10.4
17	2015	10.2	4.3	14.5	1,301,361	227,909	4.3	-10.2
18	2016	10.2	4.3	14.5	1,302,207	228,057	4.4	-10.1
19	2017	10.2	4.3	14.5	1,303,053	228,206	4.5	-10.0
20	2018	10.2	4.3	14.5	1,303,900	228,354	4.6	-9.9
21	2019	10.2	4.3	14.5	1,304,748	228,502	4.7	-9.8
22	2020	10.2	4.3	14.5	1,305,596	228,651	4.8	-9.7
23	2021	10.2	4.3	14.5	1,305,596	228,651	5.0	-9.5
24	2022	10.2	4.3	14.5	1,305,596	228,651	5.1	-9.4
25	2023	10.2	4.3	14.5	1,305,596	228,651	5.2	-9.3
26	2024	10.2	4.3	14.5	1,305,596	228,651	5.3	-9.2
27	2025	10.2	4.3	14.5	1,305,596	228,651	5.5	-9.0
28	2026	10.2	4.3	14.5	1,305,596	228,651	5.6	-8.9
29	2027	10.2	4.3	14.5	1,305,596	228,651	5.8	-8.8
30	2028	10.2	4.3	14.5	1,305,596	228,651	5.9	-8.6
31	2029	10.2	4.3	14.5	1,305,596	228,651	6.0	-8.5
32	2030	10.2	4.3	14.5	1,305,596	228,651	6.2	-8.3
33	2031	10.2	4.3	14.5	1,305,596	228,651	6.4	-8.2
34	2032	10.2	4.3	14.5	1,305,596	228,651	6.5	-8.0
35	2033	10.2	4.3	14.5	1,305,596	228,651	6.7	-7.8
36	2034	10.2	4.3	14.5	1,305,596	228,651	6.8	-7.7
37	2035	10.2	4.3	14.5	1,305,596	228,651	7.0	-7.5
38	2036	10.2	4.3	14.5	1,305,596	228,651	7.2	-7.3
39	2037	10.2	4.3	14.5	1,305,596	228,651	7.4	-7.1
40	2038	10.2	4.3	14.5	1,305,596	228,651	7.6	-7.0
41	2039	10.2	4.3	14.5	1,305,596	228,651	7.7	-6.8
42	2040	10.2	4.3	14.5	1,305,596	228,651	7.9	-6.6
43	2041	10.2	4.3	14.5	1,305,596	228,651	8.1	-6.4
44	2042	10.2	4.3	14.5	1,305,596	228,651	8.3	-6.2
45	2043	10.2	4.3	14.5	1,305,596	228,651	8.5	-6.0
46	2044	10.2	4.3	14.5	1,305,596	228,651	8.8	-5.8
47	2045	10.2	4.3	14.5	1,305,596	228,651	9.0	-5.5
48	2046	10.2	4.3	14.5	1,305,596	228,651	9.2	-5.3
49	2047	10.2	4.3	14.5	1,305,596	228,651	9.4	-5.1
50	2048	10.2	4.3	14.5	1,305,596	228,651	9.7	-4.8
51	2049	10.2	4.3	14.5	1,305,596	228,651	9.9	-4.6
52	2050	10.2	4.3	14.5	1,305,596	228,651	10.2	-4.4
53	2051	10.2	4.3	14.5	1,305,596	228,651	10.4	-4.1
54	2052	10.2	4.3	14.5	1,305,596	228,651	10.7	-3.8
55	2053	10.2	4.3	14.5	1,305,596	228,651	10.9	-3.6
56	2054	10.2	4.3	14.5	1,305,596	228,651	11.2	-3.3
57	2055	10.2	4.3	14.5	1,305,596	228,651	11.5	-3.0
Total		509.8	202.8	712.6			333.8	-378.8
In the condition of discount rate at 10 %:								
Net Present value (NPV):				68.3			30.2	-45.6
B/C								0.44

**Table L.3.16 Suitability of OM Charge for Urban
Drainage Facilities in Case of
VND2,000/HH per Month Base**

Year in order	OM and Replacement Cost			Service Population in C Zone total for FS level	HH in total 5.71 p/HH	Benefit (revenue of OM charge (2.5%/annum) 24,000 (VN/HH)	Cash balance
	1st phase	2nd phase	Cost in total				
(Base year)				1,287,065	as of 1997)		
1 1999	0.0	0.0	0.0				0.0
2 2000	0.0	0.0	0.0				0.0
3 2001	0.0	0.0	0.0				0.0
4 2002	0.0	0.0	0.0		0	0.0	0.0
5 2003	0.0	0.0	0.0		0	0.0	0.0
6 2004	0.0	0.0	0.0		0	0.0	0.0
7 2005	0.0	0.0	0.0		0	0.0	0.0
8 2006	10.2	0.0	10.2	1,293,773	226,580	6.8	-3.4
9 2007	10.2	0.0	10.2	1,294,614	226,727	7.0	-3.2
10 2008	10.2	0.0	10.2	1,295,455	226,875	7.1	-3.1
11 2009	10.2	4.3	14.5	1,296,297	227,022	7.3	-7.2
12 2010	10.2	4.3	14.5	1,297,140	227,170	7.5	-7.0
13 2011	10.2	4.3	14.5	1,297,983	227,318	7.7	-6.8
14 2012	10.2	4.3	14.5	1,298,827	227,465	7.9	-6.6
15 2013	10.2	4.3	14.5	1,299,671	227,613	8.1	-6.4
16 2014	10.2	4.3	14.5	1,300,516	227,761	8.3	-6.2
17 2015	10.2	4.3	14.5	1,301,361	227,909	8.5	-6.0
18 2016	10.2	4.3	14.5	1,302,207	228,057	8.8	-5.8
19 2017	10.2	4.3	14.5	1,303,053	228,206	9.0	-5.5
20 2018	10.2	4.3	14.5	1,303,900	228,354	9.2	-5.3
21 2019	10.2	4.3	14.5	1,304,748	228,502	9.4	-5.1
22 2020	10.2	4.3	14.5	1,305,596	228,651	9.7	-4.8
23 2021	10.2	4.3	14.5	1,305,596	228,651	9.9	-4.6
24 2022	10.2	4.3	14.5	1,305,596	228,651	10.2	-4.3
25 2023	10.2	4.3	14.5	1,305,596	228,651	10.4	-4.1
26 2024	10.2	4.3	14.5	1,305,596	228,651	10.7	-3.8
27 2025	10.2	4.3	14.5	1,305,596	228,651	11.0	-3.6
28 2026	10.2	4.3	14.5	1,305,596	228,651	11.2	-3.3
29 2027	10.2	4.3	14.5	1,305,596	228,651	11.5	-3.0
30 2028	10.2	4.3	14.5	1,305,596	228,651	11.8	-2.7
31 2029	10.2	4.3	14.5	1,305,596	228,651	12.1	-2.4
32 2030	10.2	4.3	14.5	1,305,596	228,651	12.4	-2.1
33 2031	10.2	4.3	14.5	1,305,596	228,651	12.7	-1.8
34 2032	10.2	4.3	14.5	1,305,596	228,651	13.0	-1.5
35 2033	10.2	4.3	14.5	1,305,596	228,651	13.3	-1.2
36 2034	10.2	4.3	14.5	1,305,596	228,651	13.7	-0.8
37 2035	10.2	4.3	14.5	1,305,596	228,651	14.0	-0.5
38 2036	10.2	4.3	14.5	1,305,596	228,651	14.4	-0.1
39 2037	10.2	4.3	14.5	1,305,596	228,651	14.7	0.2
40 2038	10.2	4.3	14.5	1,305,596	228,651	15.1	0.6
41 2039	10.2	4.3	14.5	1,305,596	228,651	15.5	1.0
42 2040	10.2	4.3	14.5	1,305,596	228,651	15.9	1.4
43 2041	10.2	4.3	14.5	1,305,596	228,651	16.3	1.8
44 2042	10.2	4.3	14.5	1,305,596	228,651	16.7	2.2
45 2043	10.2	4.3	14.5	1,305,596	228,651	17.1	2.6
46 2044	10.2	4.3	14.5	1,305,596	228,651	17.5	3.0
47 2045	10.2	4.3	14.5	1,305,596	228,651	18.0	3.4
48 2046	10.2	4.3	14.5	1,305,596	228,651	18.4	3.9
49 2047	10.2	4.3	14.5	1,305,596	228,651	18.9	4.4
50 2048	10.2	4.3	14.5	1,305,596	228,651	19.3	4.8
51 2049	10.2	4.3	14.5	1,305,596	228,651	19.8	5.3
52 2050	10.2	4.3	14.5	1,305,596	228,651	20.3	5.8
53 2051	10.2	4.3	14.5	1,305,596	228,651	20.8	6.3
54 2052	10.2	4.3	14.5	1,305,596	228,651	21.3	6.8
55 2053	10.2	4.3	14.5	1,305,596	228,651	21.9	7.4
56 2054	10.2	4.3	14.5	1,305,596	228,651	22.4	7.9
57 2055	10.2	4.3	14.5	1,305,596	228,651	23.0	8.5
Total	509.8	202.8	712.6			667.6	-45.0
In the condition of discount rate at 10 %:							
Net Present value (NPV):				68.3		60.4	-23.0
I/C							0.88

**Table L.3.17 Suitability of OM Charge for Urban
Drainage Facilities in Case of
VND3,000/III per Month Base**

Year in order	Year	OM and Replacement Cost			Service Population in C Zone total for FS level	III in total 5.7I p/III	Benefit (revenue of OM charge (2.5%/annum) (VND/III)	Cash balance
		1st phase	2nd phase	Cost in total				
	(Base year)				1,287,065	as of 1997)	36,000	
1	1999	0.0	0.0	0.0				0.0
2	2000	0.0	0.0	0.0				0.0
3	2001	0.0	0.0	0.0				0.0
4	2002	0.0	0.0	0.0		0	0.0	0.0
5	2003	0.0	0.0	0.0		0	0.0	0.0
6	2004	0.0	0.0	0.0		0	0.0	0.0
7	2005	0.0	0.0	0.0		0	0.0	0.0
8	2006	10.2	0.0	10.2	1,293,773	226,580	10.2	0.0
9	2007	10.2	0.0	10.2	1,294,614	226,727	10.4	0.3
10	2008	10.2	0.0	10.2	1,295,455	226,875	10.7	0.5
11	2009	10.2	4.3	14.5	1,296,297	227,022	11.0	-3.5
12	2010	10.2	4.3	14.5	1,297,140	227,170	11.3	-3.2
13	2011	10.2	4.3	14.5	1,297,983	227,318	11.6	-2.9
14	2012	10.2	4.3	14.5	1,298,827	227,465	11.9	-2.7
15	2013	10.2	4.3	14.5	1,299,671	227,613	12.2	-2.3
16	2014	10.2	4.3	14.5	1,300,516	227,761	12.5	-2.0
17	2015	10.2	4.3	14.5	1,301,361	227,909	12.8	-1.7
18	2016	10.2	4.3	14.5	1,302,207	228,057	13.1	-1.4
19	2017	10.2	4.3	14.5	1,303,053	228,206	13.5	-1.0
20	2018	10.2	4.3	14.5	1,303,900	228,354	13.8	-0.7
21	2019	10.2	4.3	14.5	1,304,748	228,502	14.2	-0.3
22	2020	10.2	4.3	14.5	1,305,596	228,651	14.5	0.0
23	2021	10.2	4.3	14.5	1,305,596	228,651	14.9	0.4
24	2022	10.2	4.3	14.5	1,305,596	228,651	15.3	0.8
25	2023	10.2	4.3	14.5	1,305,596	228,651	15.6	1.1
26	2024	10.2	4.3	14.5	1,305,596	228,651	16.0	1.5
27	2025	10.2	4.3	14.5	1,305,596	228,651	16.4	1.9
28	2026	10.2	4.3	14.5	1,305,596	228,651	16.8	2.3
29	2027	10.2	4.3	14.5	1,305,596	228,651	17.3	2.8
30	2028	10.2	4.3	14.5	1,305,596	228,651	17.7	3.2
31	2029	10.2	4.3	14.5	1,305,596	228,651	18.1	3.6
32	2030	10.2	4.3	14.5	1,305,596	228,651	18.6	4.1
33	2031	10.2	4.3	14.5	1,305,596	228,651	19.1	4.5
34	2032	10.2	4.3	14.5	1,305,596	228,651	19.5	5.0
35	2033	10.2	4.3	14.5	1,305,596	228,651	20.0	5.5
36	2034	10.2	4.3	14.5	1,305,596	228,651	20.5	6.0
37	2035	10.2	4.3	14.5	1,305,596	228,651	21.0	6.5
38	2036	10.2	4.3	14.5	1,305,596	228,651	21.6	7.1
39	2037	10.2	4.3	14.5	1,305,596	228,651	22.1	7.6
40	2038	10.2	4.3	14.5	1,305,596	228,651	22.7	8.1
41	2039	10.2	4.3	14.5	1,305,596	228,651	23.2	8.7
42	2040	10.2	4.3	14.5	1,305,596	228,651	23.8	9.3
43	2041	10.2	4.3	14.5	1,305,596	228,651	24.4	9.9
44	2042	10.2	4.3	14.5	1,305,596	228,651	25.0	10.5
45	2043	10.2	4.3	14.5	1,305,596	228,651	25.6	11.1
46	2044	10.2	4.3	14.5	1,305,596	228,651	26.3	11.8
47	2045	10.2	4.3	14.5	1,305,596	228,651	26.9	12.4
48	2046	10.2	4.3	14.5	1,305,596	228,651	27.6	13.1
49	2047	10.2	4.3	14.5	1,305,596	228,651	28.3	13.8
50	2048	10.2	4.3	14.5	1,305,596	228,651	29.0	14.5
51	2049	10.2	4.3	14.5	1,305,596	228,651	29.7	15.2
52	2050	10.2	4.3	14.5	1,305,596	228,651	30.5	16.0
53	2051	10.2	4.3	14.5	1,305,596	228,651	31.2	16.7
54	2052	10.2	4.3	14.5	1,305,596	228,651	32.0	17.5
55	2053	10.2	4.3	14.5	1,305,596	228,651	32.8	18.3
56	2054	10.2	4.3	14.5	1,305,596	228,651	33.6	19.1
57	2055	10.2	4.3	14.5	1,305,596	228,651	34.5	20.0
Total		509.8	202.8	712.6			1,001.4	288.8
In the condition of discount rate at 10 %								
Net Present value (NPV)				68.3			90.5	-0.3
B/C								1.33

Table L.3.18 Suitability of OM Charge for Urban Drainage Facilities in Case of VND2,270/III per Month Base

Year in order	Year	OM and Replacement Cost			Service Population in C Zone for FS level	III in total 5.71 p/III	Benefit (revenue of OM charge (2.5%/annum))	Cash balance
		1st phase	2nd phase	Cost in total				
	(base year)				1,287,065 as of 1997)	27,240		
1	1999	0.0	0.0	0.0		(VND/III)	0.0	
2	2000	0.0	0.0	0.0			0.0	
3	2001	0.0	0.0	0.0			0.0	
4	2002	0.0	0.0	0.0		0	0.0	
5	2003	0.0	0.0	0.0		0	0.0	
6	2004	0.0	0.0	0.0		0	0.0	
7	2005	0.0	0.0	0.0		0	0.0	
8	2006	10.2	0.0	10.2	1,293,773	226,580	7.7	
9	2007	10.2	0.0	10.2	1,294,614	226,727	7.9	
10	2008	10.2	0.0	10.2	1,295,455	226,875	8.1	
11	2009	10.2	4.3	14.5	1,296,297	227,022	8.3	
12	2010	10.2	4.3	14.5	1,297,140	227,170	8.5	
13	2011	10.2	4.3	14.5	1,297,983	227,318	8.7	
14	2012	10.2	4.3	14.5	1,298,827	227,465	9.0	
15	2013	10.2	4.3	14.5	1,299,671	227,613	9.2	
16	2014	10.2	4.3	14.5	1,300,516	227,761	9.4	
17	2015	10.2	4.3	14.5	1,301,361	227,909	9.7	
18	2016	10.2	4.3	14.5	1,302,207	228,057	9.9	
19	2017	10.2	4.3	14.5	1,303,053	228,206	10.2	
20	2018	10.2	4.3	14.5	1,303,900	228,354	10.4	
21	2019	10.2	4.3	14.5	1,304,748	228,502	10.7	
22	2020	10.2	4.3	14.5	1,305,596	228,651	11.0	
23	2021	10.2	4.3	14.5	1,305,596	228,651	11.3	
24	2022	10.2	4.3	14.5	1,305,596	228,651	11.5	
25	2023	10.2	4.3	14.5	1,305,596	228,651	11.8	
26	2024	10.2	4.3	14.5	1,305,596	228,651	12.1	
27	2025	10.2	4.3	14.5	1,305,596	228,651	12.4	
28	2026	10.2	4.3	14.5	1,305,596	228,651	12.7	
29	2027	10.2	4.3	14.5	1,305,596	228,651	13.1	
30	2028	10.2	4.3	14.5	1,305,596	228,651	13.4	
31	2029	10.2	4.3	14.5	1,305,596	228,651	13.7	
32	2030	10.2	4.3	14.5	1,305,596	228,651	14.1	
33	2031	10.2	4.3	14.5	1,305,596	228,651	14.4	
34	2032	10.2	4.3	14.5	1,305,596	228,651	14.8	
35	2033	10.2	4.3	14.5	1,305,596	228,651	15.2	
36	2034	10.2	4.3	14.5	1,305,596	228,651	15.5	
37	2035	10.2	4.3	14.5	1,305,596	228,651	15.9	
38	2036	10.2	4.3	14.5	1,305,596	228,651	16.3	
39	2037	10.2	4.3	14.5	1,305,596	228,651	16.7	
40	2038	10.2	4.3	14.5	1,305,596	228,651	17.1	
41	2039	10.2	4.3	14.5	1,305,596	228,651	17.6	
42	2040	10.2	4.3	14.5	1,305,596	228,651	18.0	
43	2041	10.2	4.3	14.5	1,305,596	228,651	18.5	
44	2042	10.2	4.3	14.5	1,305,596	228,651	18.9	
45	2043	10.2	4.3	14.5	1,305,596	228,651	19.4	
46	2044	10.2	4.3	14.5	1,305,596	228,651	19.9	
47	2045	10.2	4.3	14.5	1,305,596	228,651	20.4	
48	2046	10.2	4.3	14.5	1,305,596	228,651	20.9	
49	2047	10.2	4.3	14.5	1,305,596	228,651	21.4	
50	2048	10.2	4.3	14.5	1,305,596	228,651	21.9	
51	2049	10.2	4.3	14.5	1,305,596	228,651	22.5	
52	2050	10.2	4.3	14.5	1,305,596	228,651	23.1	
53	2051	10.2	4.3	14.5	1,305,596	228,651	23.6	
54	2052	10.2	4.3	14.5	1,305,596	228,651	24.2	
55	2053	10.2	4.3	14.5	1,305,596	228,651	24.8	
56	2054	10.2	4.3	14.5	1,305,596	228,651	25.4	
57	2055	10.2	4.3	14.5	1,305,596	228,651	26.1	
Total		509.8	202.8	712.6			757.7	
In the condition of discount rate at 10 %:								
Net Present value (NPV)					68.3		68.5	
B/C							-16.8	
							1.00	

Table L.3.19 Financial Internal Rate of Return (FIRR) in Case of VND12,500/Month in THNDT Zone for Sewerage Treatment Services

		Cost for THSDT for 1st Phase			Cost for THSDT for 2nd Phase			Benefit		(billion VND)		
Year in order	Year	Construction cost and OM cost	Reserves for replacement for treatment plant	Reserves for replacement for pumping stations	Sub-total	Construction cost and OM cost	Reserves for replacement for treatment plant	Reserves for replacement for pumping stations	Sub-total	Cost in total	(Revenue in total taking escalation of 2.5 %/annum into account) (Based on VND12,500 per Hlt month in base year)	Cash balance
[Base year: 1998]												
1	1999				0.0					0.0	0.0	0.0
2	2000	133.2			133.2					133.2	0.0	-133.2
3	2001	193.2			193.2					193.2	0.0	-193.2
4	2002	310.2			310.2					310.2	0.0	-310.2
5	2003	411.9			411.9					411.9	0.0	-411.9
6	2004	411.9			411.9					411.9	0.0	-411.9
7	2005	310.2			310.2	90.9			90.9	401.1	0.0	-401.1
8	2006	19.9	7.8	4.2	31.8	493.0			493.0	431.8	32.1	-492.7
9	2007	19.9	7.8	4.2	31.8	624.6			624.6	656.4	50.3	-606.1
10	2008	19.9	7.8	4.2	31.8	624.6			624.6	656.4	69.5	-587.0
11	2009	19.9	7.8	4.2	31.8	624.6			624.6	656.4	89.5	-566.9
12	2010	19.9	7.8	4.2	31.8	292.1			292.1	323.9	110.5	-213.4
13	2011	19.9	7.8	4.2	31.8	45.2	19.6	0.6	66.4	98.2	132.8	34.6
14	2012	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	136.1	37.9
15	2013	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	139.5	41.3
16	2014	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	143.0	44.8
17	2015	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	146.5	48.3
18	2016	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	150.2	52.0
19	2017	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	154.0	55.8
20	2018	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	157.8	59.6
21	2019	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	161.8	63.5
22	2020	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	162.1	63.9
23	2021	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	169.9	71.7
24	2022	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	174.2	76.0
25	2023	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	178.6	80.3
26	2024	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	183.0	84.8
27	2025	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	187.6	89.4
28	2026	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	192.3	94.1
29	2027	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	197.1	98.9
30	2028	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	202.0	103.8
31	2029	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	207.1	108.9
32	2030	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	212.2	114.0
33	2031	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	217.5	119.3
34	2032	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	223.0	124.8
35	2033	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	228.6	130.3
36	2034	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	234.3	136.1
37	2035	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	240.1	141.9
38	2036	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	246.1	147.9
39	2037	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	252.3	154.1
40	2038	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	258.6	160.4
41	2039	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	265.1	166.8
42	2040	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	271.7	173.5
43	2041	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	278.5	180.3
44	2042	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	285.4	187.2
45	2043	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	292.6	194.4
46	2044	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	299.9	201.7
47	2045	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	307.4	209.2
48	2046	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	315.1	216.9
49	2047	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	322.9	224.7
50	2048	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	331.0	232.8
51	2049	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	339.3	241.1
52	2050	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	347.8	249.6
53	2051	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	356.5	258.3
54	2052	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	365.4	267.2
55	2053	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	374.5	276.3
56	2054	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	383.9	285.7
57	2055	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	393.5	295.3
Total		2,824.2			3,421.1						11,170.5	2,101.5
In the condition of discount rate at 10 %:												
Net Present value (NPV):										2,573.0	669.8	-1,903.2
Financial internal rate of return:												1.20%
B-C												0.26

**Table L.3.20 Suitability Analysis of Proposed Services Charge of
VND12,500/Month in THDNDT Zone for
Sewerage Treatment Services**

		Cost for THDNDT for 1st Phase				Cost for THDNDT for 2nd Phase				Benefit		(billion VND)
Year in order	Year	OM cost	Reserves for replacement for treatment plant	Reserves for replacement for pumping stations	Sub-total	OM cost	Reserves for replacement for treatment plant	Reserves for replacement for pumping stations	Sub-total	Const in total	(Revenue in total taking escalation of 2.5 %/annum into account based on (VND12,500/ (111 month))	Cash balance
(Base year 1993)												
1	1999				0.0					0.0	0.0	0.0
2	2000				0.0					0.0	0.0	0.0
3	2001				0.0					0.0	0.0	0.0
4	2002				0.0					0.0	0.0	0.0
5	2003				0.0					0.0	0.0	0.0
6	2004				0.0					0.0	0.0	0.0
7	2005				0.0					0.0	0.0	0.0
8	2006	19.9	7.8	4.2	31.8					31.8	32.1	0.3
9	2007	19.9	7.8	4.2	31.8					31.8	50.3	18.5
10	2008	19.9	7.8	4.2	31.8					31.8	69.5	37.7
11	2009	19.9	7.8	4.2	31.8					31.8	89.5	57.7
12	2010	19.9	7.8	4.2	31.8					31.8	110.5	78.7
13	2011	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	132.8	34.6
14	2012	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	136.1	37.9
15	2013	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	139.5	41.3
16	2014	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	143.0	44.8
17	2015	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	146.5	48.3
18	2016	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	150.2	52.0
19	2017	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	154.0	55.8
20	2018	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	157.8	59.6
21	2019	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	161.8	63.5
22	2020	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	165.8	67.6
23	2021	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	169.9	71.7
24	2022	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	174.2	76.0
25	2023	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	178.6	80.3
26	2024	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	183.0	84.8
27	2025	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	187.6	89.4
28	2026	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	192.3	94.1
29	2027	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	197.1	98.9
30	2028	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	202.0	103.8
31	2029	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	207.1	108.9
32	2030	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	212.2	114.0
33	2031	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	217.5	119.3
34	2032	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	223.0	124.8
35	2033	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	228.6	130.3
36	2034	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	234.3	136.1
37	2035	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	240.1	141.9
38	2036	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	246.1	147.9
39	2037	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	252.3	154.1
40	2038	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	258.6	160.4
41	2039	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	265.1	166.8
42	2040	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	271.7	173.5
43	2041	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	278.5	180.3
44	2042	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	285.4	187.2
45	2043	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	292.6	194.4
46	2044	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	299.9	201.7
47	2045	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	307.4	209.2
48	2046	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	315.1	216.9
49	2047	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	322.9	224.7
50	2048	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	331.0	232.8
51	2049	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	339.3	241.1
52	2050	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	347.8	249.6
53	2051	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	356.5	258.3
54	2052	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	365.4	267.2
55	2053	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	374.5	276.3
56	2054	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	383.9	285.7
57	2055	19.9	7.8	4.2	31.8	46.2	19.6	0.6	66.4	98.2	393.5	295.3
Total		993.5			1,390.4					4,578.6	11,174.2	6,395.6
In the condition of discount rate at 10 %:												
Net Present value (NPV):										370.5	670.2	299.7
B C												1.81

Table L.3.21 Repayability Analysis for Sewerage System Improvement Works in Ho Chi Minh City in Case of JBIC Loan

Reference:

Supporting Capital Expenditure of the Government

Year in order	Year	(billion VND)										(billion VND)		
		Construction cost	Out flow			OM cost for sewerage services	In flow			In flow in total	Cash balance	Total capital expenditure of the Government (5% growth/y)	Subsidy to HCMC in total (10%)	Subsidized amount for the works (10%)
			Interest	Repayment of principal	Total		Foreign borrow	Local finance	Revenue in case of increasing by 2.5 %/y.					
1	1998	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	18,254.3	1,825.4	182.5
2	1999	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	19,167.0	1,916.7	191.7
3	2000	136.9	0.0	0.0	136.9	0.0	52.4	84.5	0.0	136.9	0.0	20,125.3	2,012.5	201.3
4	2001	202.9	0.7	0.0	203.5	0.0	195.0	7.8	0.0	202.9	-0.7	21,131.6	2,113.2	211.3
5	2002	333.7	3.2	0.0	337.0	0.0	325.7	8.1	0.0	333.7	-3.2	22,188.2	2,218.8	221.9
6	2003	487.1	7.5	0.0	494.5	0.0	478.8	8.3	0.0	487.1	-7.5	23,297.6	2,329.8	233.0
7	2004	499.1	13.7	0.0	512.8	0.0	490.5	8.5	0.0	499.1	-13.7	24,462.4	2,446.2	244.6
8	2005	463.9	20.1	0.0	484.0	0.0	439.3	24.7	0.0	463.9	-20.1	25,685.6	2,568.6	256.9
9	2006	478.1	25.8	0.0	503.8	31.8	465.0	13.1	32.1	540.2	-25.5	26,969.8	2,697.0	269.7
10	2007	759.1	31.8	0.0	790.9	31.8	745.6	13.5	50.3	809.5	-13.3	28,318.3	2,831.8	283.2
11	2008	777.9	41.5	0.0	819.4	31.8	764.0	13.9	69.5	847.4	-3.8	29,734.2	2,973.4	297.3
12	2009	797.2	51.4	0.0	848.7	31.8	787.9	14.3	89.5	886.7	6.3	31,221.0	3,122.1	312.2
13	2010	382.6	61.6	0.0	444.2	31.8	367.8	14.7	110.5	493.1	17.1	32,782.0	3,278.2	327.8
14	2011	0.0	65.4	225.2	291.6	98.2	0.0	0.0	132.8	132.8	-257.1	34,421.1	3,442.1	344.2
15	2012	0.0	63.5	228.2	291.6	98.2	0.0	0.0	136.1	136.1	-253.8	36,142.2	3,614.2	361.4
16	2013	0.0	60.5	231.1	291.6	98.2	0.0	0.0	139.5	139.5	-250.4	37,949.3	3,794.9	379.5
17	2014	0.0	57.5	234.1	291.6	98.2	0.0	0.0	143.0	143.0	-246.9	39,816.7	3,981.7	398.5
18	2015	0.0	54.4	237.2	291.6	98.2	0.0	0.0	146.5	146.5	-243.3	41,739.1	4,173.9	417.4
19	2016	0.0	51.4	240.3	291.6	98.2	0.0	0.0	150.2	150.2	-239.6	43,731.0	4,373.1	437.3
20	2017	0.0	48.2	243.4	291.6	98.2	0.0	0.0	154.0	154.0	-235.9	45,793.4	4,579.3	457.9
21	2018	0.0	45.1	246.6	291.6	98.2	0.0	0.0	157.8	157.8	-232.0	47,934.0	4,793.4	479.3
22	2019	0.0	41.9	249.8	291.6	98.2	0.0	0.0	161.8	161.8	-228.1	50,155.7	5,015.6	501.6
23	2020	0.0	38.6	253.0	291.6	98.2	0.0	0.0	165.8	165.8	-224.0	52,468.4	5,246.8	524.7
24	2021	0.0	35.3	256.3	291.6	98.2	0.0	0.0	169.9	169.9	-219.9	54,873.4	5,487.3	548.7
25	2022	0.0	32.0	259.6	291.6	98.2	0.0	0.0	174.2	174.2	-215.6	57,381.8	5,738.2	573.8
26	2023	0.0	28.6	263.0	291.6	98.2	0.0	0.0	178.6	178.6	-211.3	60,000.4	6,000.0	600.0
27	2024	0.0	25.2	266.4	291.6	98.2	0.0	0.0	183.0	183.0	-206.8	62,736.1	6,273.6	627.4
28	2025	0.0	21.7	269.9	291.6	98.2	0.0	0.0	187.6	187.6	-202.2	65,599.4	6,559.9	656.0
29	2026	0.0	18.2	273.4	291.6	98.2	0.0	0.0	192.3	192.3	-197.6	68,593.0	6,859.3	685.9
30	2027	0.0	14.7	277.0	291.6	98.2	0.0	0.0	197.1	197.1	-192.7	71,720.7	7,172.1	717.2
31	2028	0.0	11.1	280.6	291.6	98.2	0.0	0.0	202.0	202.0	-187.8	75,000.8	7,500.1	750.0
32	2029	0.0	7.4	284.2	291.6	98.2	0.0	0.0	207.1	207.1	-182.8	78,439.5	7,843.9	784.4
33	2030	0.0	3.7	287.9	291.6	98.2	0.0	0.0	212.2	212.2	-177.6	82,050.4	8,205.0	820.5
34	2031	0.0			291.6	98.2	0.0	0.0	217.5	217.5	-172.3	85,847.9	8,584.8	858.5
35	2032	0.0			291.6	98.2	0.0	0.0	223.0	223.0	-166.8	90,000.0	9,000.0	900.0
36	2033	0.0			291.6	98.2	0.0	0.0	228.6	228.6	-161.3	94,439.7	9,443.9	944.4
37	2034	0.0			291.6	98.2	0.0	0.0	234.3	234.3	-155.6	99,180.4	9,918.0	991.8
38	2035	0.0			291.6	98.2	0.0	0.0	240.1	240.1	-149.7	104,240.1	10,424.0	1,042.4
39	2036	0.0			291.6	98.2	0.0	0.0	246.1	246.1	-143.6	109,639.2	10,963.9	1,096.4
40	2037	0.0			291.6	98.2	0.0	0.0	252.3	252.3	-137.1	115,399.2	11,539.9	1,154.0
41	2038	0.0			291.6	98.2	0.0	0.0	258.6	258.6	-130.4	121,539.7	12,153.9	1,215.4
42	2039	0.0			291.6	98.2	0.0	0.0	265.1	265.1	-123.1	128,589.2	12,858.9	1,285.9
43	2040	0.0			291.6	98.2	0.0	0.0	271.7	271.7	-115.4	136,669.2	13,666.9	1,366.7
44	2041	0.0			291.6	98.2	0.0	0.0	278.5	278.5	-107.1	145,809.2	14,580.9	1,458.1
45	2042	0.0			291.6	98.2	0.0	0.0	285.4	285.4	-97.8	156,049.2	15,604.9	1,560.5
46	2043	0.0			291.6	98.2	0.0	0.0	292.6	292.6	-87.4	167,509.2	16,750.9	1,675.1
47	2044	0.0			291.6	98.2	0.0	0.0	299.9	299.9	-75.9	180,309.2	18,030.9	1,803.1
48	2045	0.0			291.6	98.2	0.0	0.0	307.4	307.4	-63.4	194,589.2	19,458.9	1,945.9
Total		5,318.4	982.8	5,107.1	11,408.3		5,107.1	211.3			209.2	180,826.1	18,082.6	1,808.3

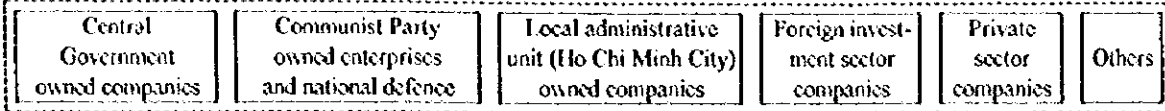
(Note)

- (1) Interest rate of foreign loan: 1.30%
- (2) Equal annual repayment amount of capital for foreign loan (million VND): 291.6
- (3) The amount of foreign borrow: total cost of construction works minus land acquisition and housing compensation.

(Base)

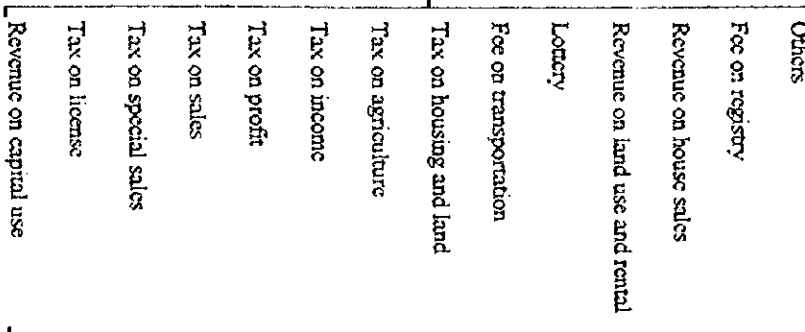
17,385
(as of 1997)

Sources of revenue

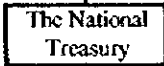


Collection of taxes and fees

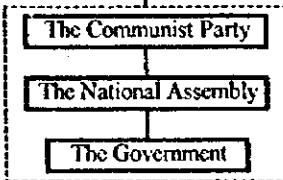
Kinds of revenue



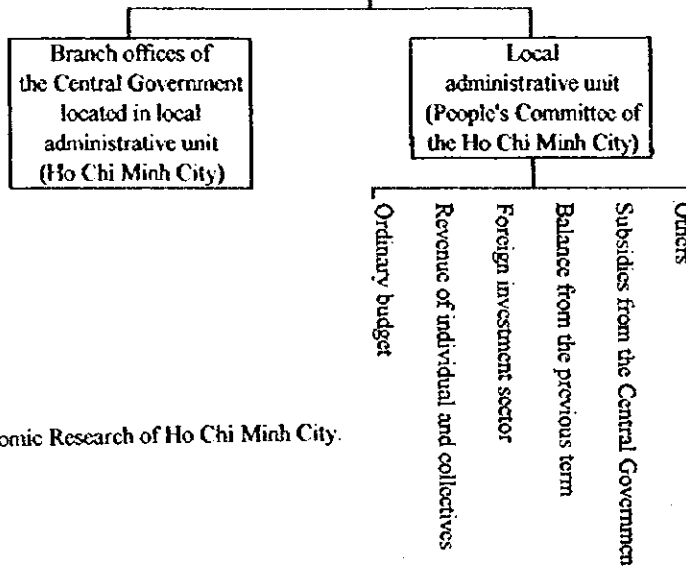
Gathering up in:



Making a budget in:

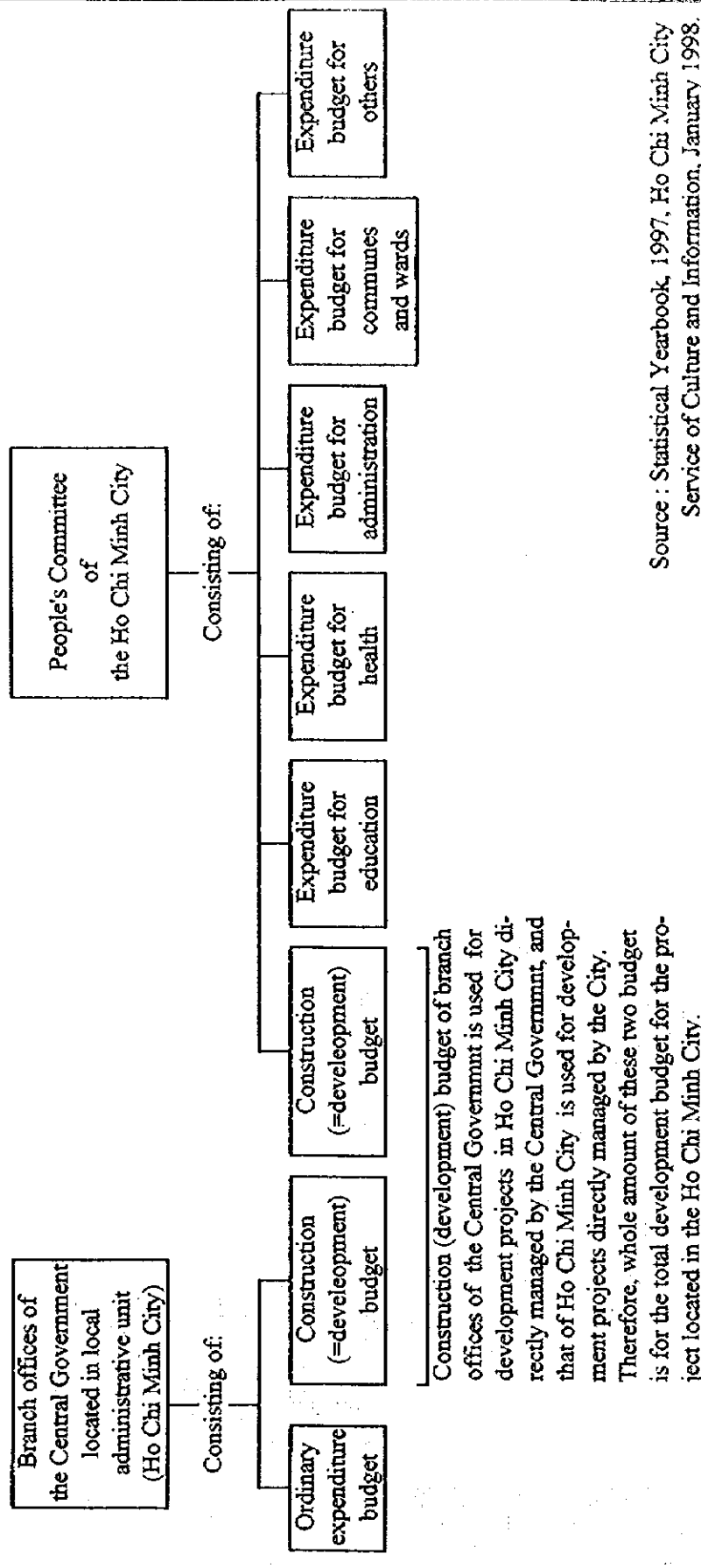


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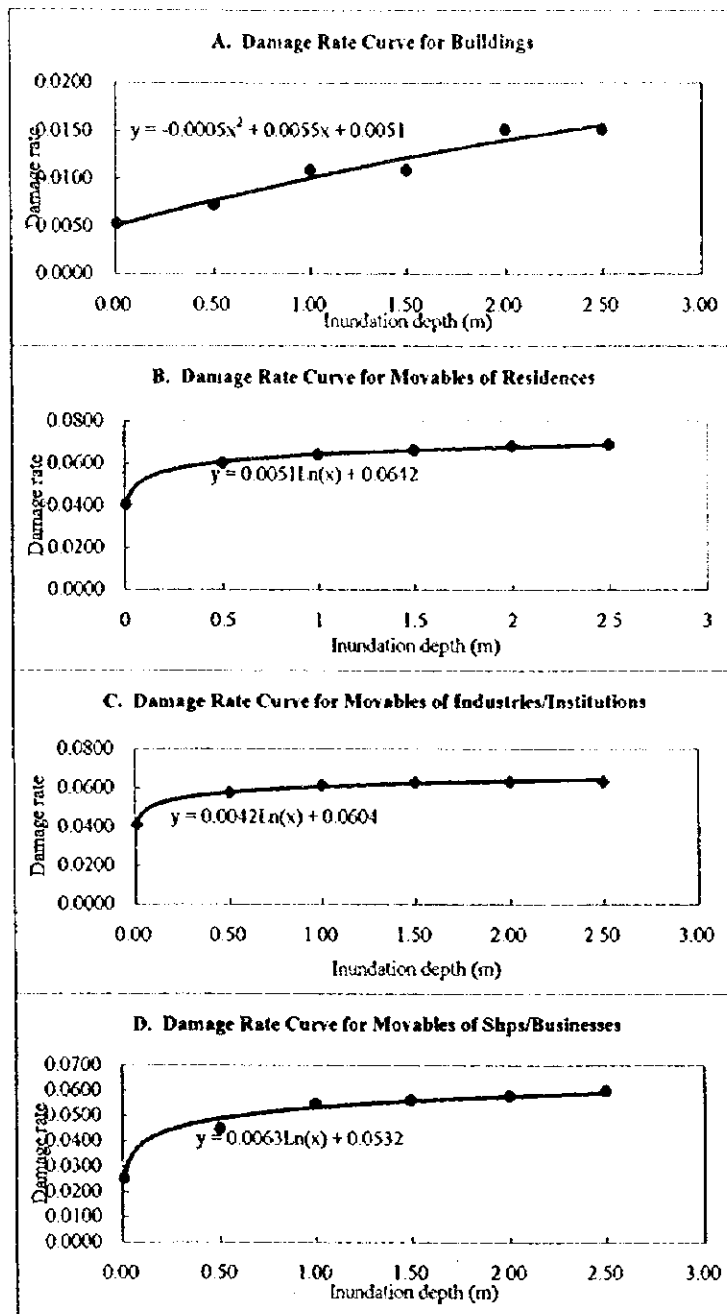
Source : Institute of Economic Research of Ho Chi Minh City.

Fig. L.1.1 Financial Mechanism of Viet Nam



Source : Statistical Yearbook, 1997, Ho Chi Minh City Service of Culture and Information, January 1998.

Fig. L.1.2 Expenditure Mechanism in Budget for Ho Chi Minh City



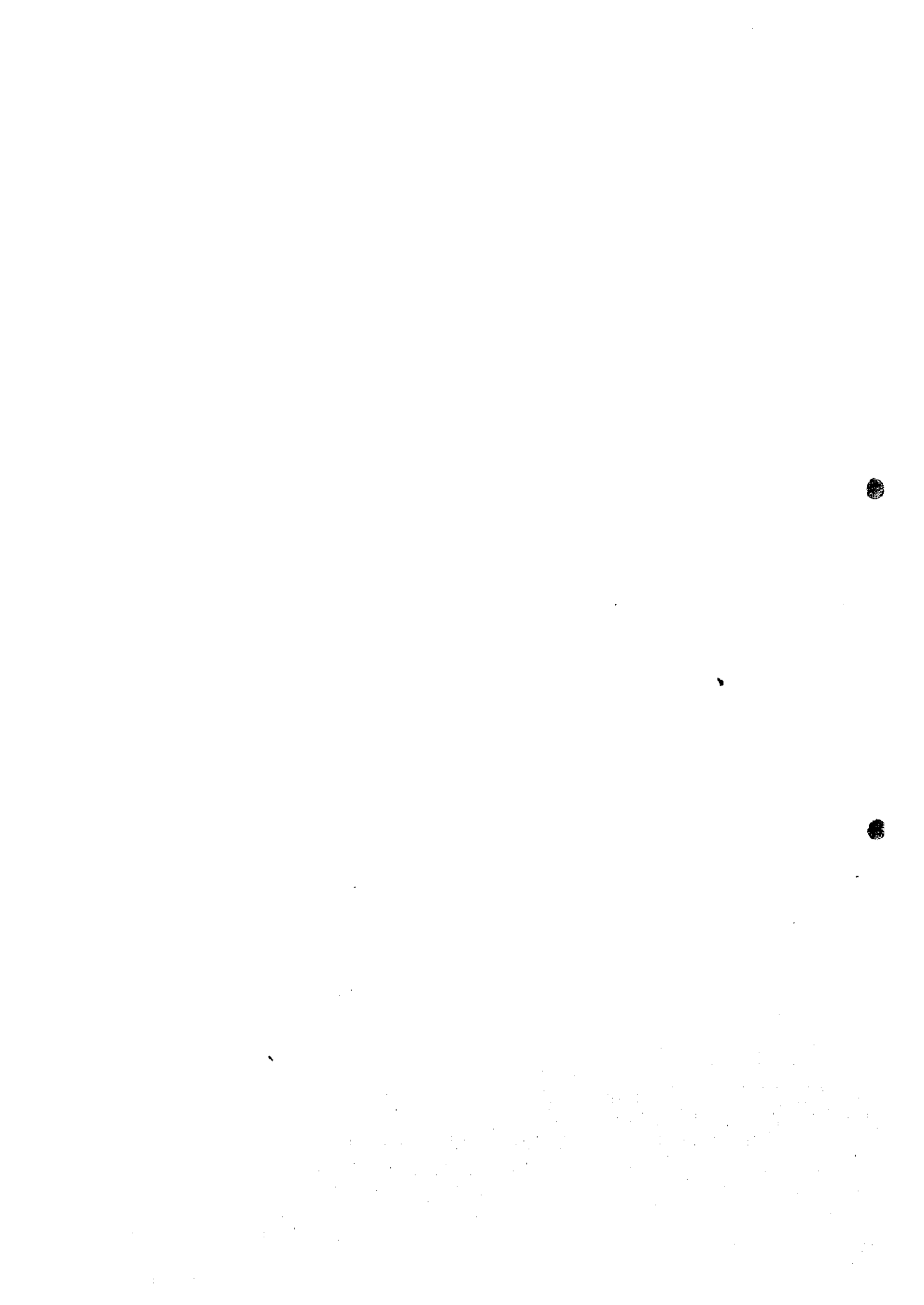
Inundation depth (m)	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.50
Damage rate												
- For buildings	0.0000	0.0056	0.0062	0.0067	0.0072	0.0077	0.0082	0.0087	0.0092	0.0096	0.0101	0.0122
- For movables of residences	0.0000	0.0525	0.0560	0.0581	0.0595	0.0607	0.0616	0.0624	0.0631	0.0637	0.0642	0.0663
- For movables of industries/institutions	0.0000	0.0507	0.0531	0.0553	0.0566	0.0575	0.0583	0.0589	0.0595	0.0600	0.0604	0.0621
- For shops/businesses	0.0000	0.0387	0.0431	0.0456	0.0474	0.0488	0.0500	0.0510	0.0518	0.0525	0.0532	0.0558

Fig. L.2.1 Damage Rate Curve

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