

## **ECONOMIC ANALYSIS – SUPPLEMENTARY TABLES**

1. **EIRR and Sensitivity Analysis.** Summary results and detailed computations are shown in Tables 1 to 8.
2. **Distribution of Net Economic Benefits and Poverty Impact Ratio.** Summary results and detailed computations are shown in Tables 9 to 14.

**Table 1: Bac Giang Urban Roads**

EIRR																													
BASE CASE-URBAN ROADS			NPV	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
Capital Investment	VND billion		-	(153.5)	(102.3)	-	-																						
Operation + Maintenance	VND billion					(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	
Periodic Maintenance	VND billion	0.05								(12.8)						(12.8)					(12.8)					(12.8)			
Benefits-VOC Savings																													
Normal Traffic	VND billion	87.33	-	-	-	-	15.7	16.1	16.6	17.0	17.5	18.0	18.5	19.0	19.5	20.1	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	
Generated Traffic	VND billion	43.66	-	-	-	-	7.8	8.1	8.3	8.5	8.7	9.0	9.2	9.5	9.8	10.0	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	
Generated Industrial Zone Tr	VND billion	43.66	-	-	-	-	7.8	8.1	8.3	8.5	8.7	9.0	9.2	9.5	9.8	10.0	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	
Benefits-Time Savings	VND billion	202.40	-	-	-	-	36.3	37.3	38.4	39.4	40.5	41.7	42.8	44.0	45.2	46.5	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	
Net Flow		157.23	-	(153.5)	(102.3)	(2.6)	65.1	67.0	68.9	68.1	73.0	75.1	77.2	79.4	68.9	84.0	86.5	86.5	86.5	86.5	73.7	86.5	86.5	86.5	86.5	73.7	86.5	86.5	
<b>EIRR</b>		<b>20.1%</b>																											
<b>SENSITIVITY ANALYSIS</b>			<b>EIRR</b>	<b>NPV</b>	<b>SV</b>																								
Increase in Capital Investment		<b>18.7%</b>	137.71	81%	-	(168.8)	(112.6)	(2.6)	65.1	67.0	68.9	68.1	73.0	75.1	77.2	79.4	68.9	84.0	86.5	86.5	86.5	73.7	86.5	86.5	86.5	86.5	73.7	86.5	86.5
Increase in Operation + Maintenance		<b>20.0%</b>	154.77	639%	-	(153.5)	(102.3)	(2.8)	64.9	66.8	68.7	56.6	72.7	74.8	76.9	79.2	67.4	83.8	86.2	86.2	86.2	72.1	86.2	86.2	86.2	86.2	72.1	86.2	86.2
Decrease in Benefits		<b>18.4%</b>	119.53	-42%	-	(153.5)	(102.3)	(2.6)	58.4	60.1	61.8	50.8	65.4	67.3	69.2	71.2	60.5	75.4	77.6	77.6	77.6	64.8	77.6	77.6	77.6	77.6	64.8	77.6	
1-Year Delay in Benefits		<b>17.4%</b>	112.16		-	(153.5)	(102.3)	(2.6)	65.1	67.0	56.2	70.9	73.0	75.1	77.2	66.6	81.7	84.0	86.5	86.5	73.7	86.5	86.5	86.5	86.5	73.7	86.5	86.5	

**Table 2: Bac Giang Wastewater**

EIRR																													
BASE CASE-WASTEWATER			NPV	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
Capital Investment	VND billion		-	(93.1)	(62.1)	-	-																						
Operation + Maintenance	VND billion	4.48				(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	
Revenue	VND billion	146.08	-	-	-	5.9	6.0	6.1	14.0	14.2	14.4	24.7	25.0	25.3	38.7	39.1	39.4	56.7	57.2	57.8	79.8	80.6	80.6	80.6	80.6	80.6	80.6	80.6	
Consumer Surplus	VND billion	178.30	-	-	-	10.8	10.9	11.1	19.3	19.5	19.6	30.4	30.7	31.0	45.1	45.5	46.0	64.0	64.7	65.3	88.5	89.4	89.4	89.4	89.4	89.4	89.4	89.4	
Net Flow		172.19	-	(93.1)	(62.1)	10.6	10.8	11.0	27.1	27.5	27.8	49.0	49.5	50.1	77.5	78.4	79.2	114.5	115.7	116.9	162.2	163.8	163.8	163.8	163.8	163.8	163.8	163.8	
<b>EIRR</b>		<b>20.9%</b>																											
<b>SENSITIVITY ANALYSIS</b>			<b>EIRR</b>	<b>NPV</b>	<b>SV</b>																								
Increase in Capital Investment		<b>19.8%</b>	160.35	145%	-	(102.4)	(68.3)	10.6	10.8	11.0	27.1	27.5	27.8	49.0	49.5	50.1	77.5	78.4	79.2	114.5	115.7	116.9	162.2	163.8	163.8	163.8	163.8	163.8	
Increase in O + M		<b>20.7%</b>	168.81	510%	-	(93.1)	(62.1)	9.9	10.1	10.3	26.5	26.8	27.2	48.3	48.9	49.5	76.9	77.7	78.6	113.9	115.1	116.3	161.5	163.2	163.2	163.2	163.2	163.2	
Decrease in Benefits		<b>19.5%</b>	139.75	-53%	-	(93.1)	(62.1)	8.9	9.1	9.2	23.8	24.1	24.4	43.4	43.9	44.5	69.2	69.9	70.6	102.5	103.5	104.6	145.3	146.8	146.8	146.8	146.8		
1-Year Delay in Benefits		<b>18.5%</b>	128.51		-	(93.1)	(62.1)	(6.2)	10.6	10.8	11.0	27.1	27.5	27.8	49.0	49.5	50.1	77.5	78.4	79.2	114.5	115.7	116.9	162.2	163.8	163.8	163.8	163.8	

**Table 3: Bac Giang Storm Water**

EIRR																												
BASE CASE-STORMWATER			NPV	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Capital Investment	VND billion		-	(80.9)	(54.0)	-	-																					
Operation + Maintenance	VND billion					(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)
Benefits	VND billion	135.34	-	-	-	23.9	24.1	24.2	24.4	24.5	24.7	24.8	25.0	25.2	25.3	25.5	25.6	25.8	26.0	26.1	26.3	26.5	26.5	26.5	26.5	26.5	26.5	26.5
Net Flow		25.07	-	(80.9)	(54.0)	22.6	22.7	22.9	23.0	23.2	23.3	23.5	23.6	23.8	24.0	24.1	24.3	24.5	24.6	24.8	25.0	25.1	25.1	25.1	25.1	25.1	25.1	25.1
<b>EIRR</b>		<b>15.2%</b>																										
<b>SENSITIVITY ANALYSIS: EIRR</b>			<b>NPV</b>	<b>SV</b>																								
Increase in Capital Investment		<b>13.7%</b>	14.78	24%	-	(89.0)	(59.4)	22.6	22.7	22.9	23.0	23.2	23.3	23.5	23.6	23.8	24.0	24.1	24.3	24.5	24.6	24.8	25.0	25.1	25.1	25.1	25.1	25.1
Increase in Operation + Maintenance		<b>15.1%</b>	24.34	342%	-	(80.9)	(54.0)	22.4	22.6	22.7	22.9	23.0	23.2	23.3	23.5	23.7	23.8	24.0	24.2	24.3	24.5	24.6	24.8	25.0	25.0	25.0	25.0	25.0
Decrease in Benefits		<b>13.5%</b>	11.54	-19%	-	(80.9)	(54.0)	20.2	20.3	20.4	20.6	20.7	20.9	21.0	21.1	21.3	21.4	21.6	21.7	21.9	22.0	22.2	22.3	22.5	22.5	22.5	22.5	
1-Year Delay in Benefits		<b>13.1%</b>	9.18		-	(80.9)	(54.0)	(1.3)	22.6	22.7	22.9	23.0	23.2	23.3	23.5	23.6	23.8	24.0	24.1	24.3	24.5	24.6	24.8	25.0	25.1	25.1	25.1	25.1

**Table 4: Mong Cai Wastewater**

EIRR																												
BASE CASE-WASTEWATER + STORMWATER		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040		
Capital Investment	VND billion	-	(187.3)	(124.9)	-	-																						
Operation + Maintenance	VND billion	2.74			(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)	(6.2)		
Revenue	VND billion	109.00	-	-	4.6	4.8	5.0	9.0	9.3	9.6	16.2	16.8	17.4	26.7	27.7	28.8	41.9	43.5	45.2	63.6	66.2	66.2	66.2	66.2	66.2	66.2		
Consumer Surplus-Wastewater	VND billion	157.87	-	-	7.7	8.1	8.4	13.0	13.6	14.2	22.7	23.7	24.8	37.3	39.0	40.8	58.9	61.7	64.7	90.9	95.4	95.4	95.4	95.4	95.4	95.4		
Benefits-Stormwater	VND billion	66.74	-	-	11.5	11.6	11.8	11.9	12.0	12.1	12.2	12.4	12.5	12.6	12.7	12.9	13.0	13.1	13.2	13.4	13.5	13.5	13.5	13.5	13.5	13.5		
Net Flow		61.45	-	(187.3)	(124.9)	17.6	18.2	18.9	27.6	28.6	29.7	44.9	46.6	48.5	70.4	73.2	76.2	107.5	112.1	116.9	161.7	168.8	168.8	168.8	168.8	168.8		
EIRR		14.1%																										
SENSITIVITY ANALYSIS-WASTE		EIRR	NPV	SV																								
Increase in Capital Investment		13.2%	37.63	26%	-	(206.0)	(137.3)	17.6	18.2	18.9	27.6	28.6	29.7	44.9	46.6	48.5	70.4	73.2	76.2	107.5	112.1	116.9	161.7	168.8	168.8	168.8	168.8	
Increase in O + M		14.0%	58.06	181%	-	(187.3)	(124.9)	17.0	17.6	18.3	27.0	28.0	29.1	44.3	46.0	47.8	69.7	72.6	75.5	106.9	111.4	116.2	161.1	168.2	168.2	168.2	168.2	
Decrease in Benefits		13.0%	28.09	-18%	-	(187.3)	(124.9)	15.2	15.8	16.4	24.2	25.1	26.1	39.8	41.4	43.0	62.7	65.2	67.9	96.2	100.2	104.5	144.9	151.3	151.3	151.3	151.3	
1-Year Delay in Benefits		12.6%	16.51		-	(187.3)	(124.9)	(6.2)	17.6	18.2	18.9	27.6	28.6	29.7	44.9	46.6	48.5	70.4	73.2	76.2	107.5	112.1	116.9	161.7	168.8	168.8	168.8	

**Table 5: Mong Cai Riverbank**

EIRR																													
BASE CASE-RIVER PROTECTION		NPV	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040		
Capital Investment	VND billion		-	(134.8)	(89.9)	-																							
Operation + Maintenance	VND billion		-	-	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)	(2.2)		
Increase in Productivity	VND billion	340.98	-	-	8.4	16.8	25.3	33.8	42.3	50.8	59.3	67.9	76.5	85.1	93.7	102.4	111.0	119.7	128.4	137.2	145.9	154.7	163.5	172.3	181.2	190.0			
Benefits-Avoided erosion	VND billion	2.44	-	-	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
Net Flow		159.76	-	(134.8)	(89.9)	6.6	15.0	23.5	32.0	40.5	49.0	57.5	66.1	74.7	83.3	91.9	100.6	109.3	117.9	126.7	135.4	144.2	152.9	161.7	170.6	179.4	188.3		
EIRR		18.7%																											
SENSITIVITY ANALYSIS		EIRR	NPV	SV																									
Increase in Capital Investment		17.6%	142.61	93%	-	(148.3)	(98.9)	6.6	15.0	23.5	32.0	40.5	49.0	57.5	66.1	74.7	83.3	91.9	100.6	109.3	117.9	126.7	135.4	144.2	152.9	161.7	170.6	179.4	188.3
Increase in Operation + Maintenance		18.6%	158.54	1307%	-	(134.8)	(89.9)	6.4	14.8	23.3	31.7	40.2	48.8	57.3	65.9	74.5	83.1	91.7	100.4	109.0	117.7	126.4	135.2	143.9	152.7	161.5	170.3	179.2	188.1
Decrease in Benefits		17.5%	125.42	-47%	-	(134.8)	(89.9)	5.7	13.3	20.9	28.5	36.2	43.9	51.6	59.3	67.0	74.7	82.5	90.3	98.1	105.9	113.8	121.6	129.5	137.4	145.3	153.3	161.2	169.2
1-Year Delay in Benefits		16.7%	112.96		-	(134.8)	(89.9)	(2.2)	6.6	15.0	23.5	32.0	40.5	49.0	57.5	66.1	74.7	83.3	91.9	100.6	109.3	117.9	126.7	135.4	144.2	152.9	161.7	170.6	179.4

**Table 6: Sa Pa Roads**

EIRR																												
BASE CASE-URBAN ROADS		NPV	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
Capital Investment	VND billion		-	(70.7)	(70.7)	(35.4)	-																					
Operation + Maintenance	VND billion					(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	
Benefits-VOC Savings																												
Normal Traffic	VND billion	27.14	-	-	-	4.4	4.6	4.7	4.9	5.1	5.3	5.5	5.8	6.0	6.2	6.5	6.8	7.0	7.3	7.6	7.9	7.9	7.9	7.9	7.9	7.9	7.9	
Generated Traffic	VND billion	13.57	50%	-	-	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.4	3.5	3.7	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	
Benefits-Time Savings	VND billion	136.15	-	-	-	22.0	22.9	23.8	24.7	25.7	26.8	27.8	28.9	30.1	31.3	32.6	33.9	35.2	36.6	38.1	39.6	39.6	39.6	39.6	39.6	39.6	39.6	
Net Flow	VND billion	39.20	-	(70.7)	(70.7)	(35.4)	26.8	27.9	29.1	30.4	31.7	33.0	34.4	35.8	37.3	38.9	40.5	42.2	44.0	45.8	47.7	49.7	49.7	49.7	49.7	49.7	49.7	
EIRR		15.3%																										
SENSITIVITY ANALYSIS		EIRR	NPV	SV																								
Increase in Capital Investment		14.1%	26.28	30%	-	(77.8)	(77.8)	(38.9)	26.8	27.9	29.1	30.4	31.7	33.0	34.4	35.8	37.3	38.9	40.5	42.2	44.0	45.8	47.7	49.7	49.7	49.7	49.7	49.7
Increase in O + M		15.2%	38.35	461%	-	(70.7)	(70.7)	(35.4)	26.6	27.8	29.0	30.2	31.5	32.8	34.2	35.7	37.2	38.7	40.4	42.0	43.8	45.6	47.5	49.5	49.5	49.5	49.5	49.5
Decrease in Benefits		15.0%	35.13	-96%	-	(70.7)	(70.7)	(35.4)	26.1	27.3	28.4	29.6	30.9	32.2	33.6	35.0	36.4	38.0	39.6	41.2	42.9	44.7	46.6	48.5	48.5	48.5	48.5	48.5
1-Year Delay in Benefits		13.4%	17.55		-	(70.7)	(70.7)	(35.4)	(1.8)	26.8	27.9	29.1	30.4	31.7	33.0	34.4	35.8	37.3	38.9	40.5	42.2	44.0	45.8	47.7	49.7	49.7	49.7	49.7

**Table 7: Sa Pa Wastewater**

EIRR - WASTEWATER + DRAINAGE																															
BASE CASE			NPV	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040			
Capital Investment	VND billion			-	(127.1)	(84.7)	-																								
Operation + Maintenance	VND billion						(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)			
Revenue	VND billion	77.11	3.88	-	-	-	-	4.6	4.8	6.6	6.9	7.3	11.8	12.5	13.3	18.9	20.1	21.4	30.0	32.1	34.3	42.2	45.2	45.2	45.2	45.2	45.2	45.2			
Consumer Surplus	VND billion	132.55		-	-	-	-	5.8	6.3	8.9	9.7	10.6	17.7	19.4	21.2	31.0	33.9	37.0	53.2	58.3	63.8	80.3	87.9	87.9	87.9	87.9	87.9	87.9			
Water source protection	VND billion	66.28	50%	-	-	-	-	2.9	3.2	4.5	4.9	5.3	8.9	9.7	10.6	15.5	16.9	18.5	26.6	29.1	31.9	40.1	44.0	44.0	44.0	44.0	44.0				
Net Flow	VND billion	85.52		-	(127.1)	(84.7)	(5.3)	8.0	9.0	14.6	16.2	17.9	33.2	36.3	39.7	60.1	65.7	71.7	104.6	114.2	124.6	157.3	171.7	171.7	171.7	171.7	171.7				
<b>EIRR</b>	<b>15.5%</b>																														
SENSITIVITY ANALYSIS			EIRR	NPV	SV																										
Increase in Capital Investment		<b>14.7%</b>	69.36	53%	-	(139.8)	(93.2)	(5.3)	8.0	9.0	14.6	16.2	17.9	33.2	36.3	39.7	60.1	65.7	71.7	104.6	114.2	124.6	157.3	171.7	171.7	171.7	171.7	171.7			
Increase in O + M		<b>15.4%</b>	82.64	297%	-	(127.1)	(84.7)	(5.8)	7.5	8.5	14.1	15.7	17.4	32.6	35.8	39.2	59.6	65.1	71.2	104.1	113.6	124.1	156.7	171.2	171.2	171.2	171.2	171.2			
Decrease in Revenue		<b>14.5%</b>	57.93	-31%	-	(127.1)	(84.7)	(5.3)	6.7	7.6	12.7	14.1	15.6	29.3	32.1	35.2	53.6	58.6	64.0	93.6	102.2	111.6	141.0	154.0	154.0	154.0	154.0	154.0			
1-Year Delay in Revenue		<b>13.9%</b>	46.66		-	(127.1)	(84.7)	(5.3)	(5.3)	8.0	9.0	14.6	16.2	17.9	33.2	36.3	39.7	60.1	65.7	71.7	104.6	114.2	124.6	157.3	171.7	171.7	171.7	171.7			

**Table 8: Sa Pa Town Center Enhancement**

EIRR																															
BASE CASE-TOWN ENHANCEMENT			NPV	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040			
Capital Investment	VND billion			-	(51.1)	(51.1)	(43.8)																								
Operation + Maintenance	VND billion							(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)	(2.9)			
Benefits-Local	VND billion	94.79		-	-	-	-	59.6	13.3	13.5	13.7	13.8	14.0	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.6	15.8	16.0	16.0	16.0	16.0	16.0				
Benefits-International	VND billion	42.36		-	-	-	-	54.0	2.4	2.5	2.5	2.6	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3				
Net Flow	VND billion	18.07		-	(51.1)	(51.1)	(43.8)	110.7	12.8	13.0	13.3	13.5	13.7	14.0	14.2	14.5	14.8	15.0	15.3	15.5	15.8	16.1	16.4	16.4	16.4	16.4	16.4				
<b>EIRR</b>	<b>15.3%</b>																														
SENSITIVITY ANALYSIS			EIRR	NPV	SV																										
Increase in Capital Investment		<b>13.3%</b>	7.57	17%	-	(56.3)	(56.3)	(48.2)	110.7	12.8	13.0	13.3	13.5	13.7	14.0	14.2	14.5	14.8	15.0	15.3	15.5	15.8	16.1	16.4	16.4	16.4	16.4	16.4			
Increase in Operation + Mainte		<b>15.1%</b>	16.67	129%	-	(51.1)	(51.1)	(43.8)	110.4	12.5	12.7	13.0	13.2	13.5	13.7	13.9	14.2	14.5	14.7	15.0	15.3	15.5	15.8	16.1	16.1	16.1	16.1	16.1			
Decrease in Benefits		<b>13.6%</b>	8.59	-19%	-	(51.1)	(51.1)	(43.8)	104.7	11.5	11.7	11.9	12.1	12.3	12.6	12.8	13.0	13.3	13.5	13.8	14.0	14.3	14.5	14.8	14.8	14.8	14.8	14.8			
1-Year Delay in Benefits		<b>12.4%</b>	2.36		-	(51.1)	(51.1)	(43.8)	(2.9)	110.7	12.8	13.0	13.3	13.5	13.7	14.0	14.2	14.5	14.8	15.0	15.3	15.5	15.8	16.1	16.4	16.4	16.4				

**Table 9: Distribution of Net Economic Benefits – Bac Giang (VND billion)**

Particulars	Financial PV	Economic PV	Econ PV less Fin PV	Government / Economy	Labor	Vehicle Operators	Passengers	Consumers	Total
<b>All Subprojects</b>									
Revenue / Benefits	146	837	691			175	202	314	691
Costs									
Equipment and Materials	336	250	(86)	86					86
Labor	127	94	(33)		33				33
Other Cost	171	127	(44)	44					44
Net Benefits	(489)	365	854	(489)					(489)
Gains and Losses				(358)	33	175	202	314	365
<b>Wastewater Improvement</b>									
Revenue / Benefits	146	324	178			-		178	178
Costs									
Equipment and Materials	96	71	(25)	25					25
Labor	41	30	(11)		11				11
Other Cost	68	51	(18)	18					18
Net Benefits	(59)	172	231	(59)					(59)
Gains and Losses				(17)	11	-		178	172
<b>Stormwater Improvements</b>									
Revenue / Benefits	-	135	135			-		135	135
Costs									
Equipment and Materials	83	62	(21)	21					21
Labor	30	22	(8)		8				8
Other Cost	36	26	(9)	9					9
Net Benefits	(148)	25	173	(148)					(148)
Gains and Losses				(118)	8	-		135	25
<b>Urban Roads</b>									
Revenue / Benefits	-	377	377			175	202		377
Costs									
Equipment and Materials	158	117	(41)	41					41
Labor	56	42	(14)		14				14
Other Cost	68	50	(17)	17					17
Net Benefits	(281)	168	449	(281)					(281)
Gains and Losses				(224)	14	175	202		168

Source: PPTA Consultants.  
PV= present value

**Table 10: Distribution of Net Economic Benefits – Mong Cai (VND billion)**

Particulars	Financial PV	Economic PV	Econ PV less Fin PV	Government / Economy	Workers	Public	Consumers	Total
<b>All Subprojects</b>								
Revenue / Benefits	109	677	568			343	225	568
Costs								
Equipment and Materials	331	246	(85)	85				85
Labor	123	91	(32)		32			32
Other Cost	160	119	(41)	41				41
Net Benefits	(504)	221	726	(504)				(504)
Gains and Losses				(378)	32	343	225	221
<b>Wastewater and Stormwater Drainage Improvement</b>								
Revenue / Benefits	109	334	225				225	225
Costs								
Equipment and Materials	192	143	(49)	49				49
Labor	73	54	(19)		19			19
Other Cost	101	75	(26)	26				26
Net Benefits	(257)	61	319	(257)				(257)
Gains and Losses				(182)	19		225	61
<b>Riverbank Protection</b>								
Revenue / Benefits	-	343	343			343		343
Costs								
Equipment and Materials	138	103	(36)	36				36
Labor	49	37	(13)		13			13
Other Cost	59	44	(15)	15				15
Net Benefits	(247)	160	407	(247)				(247)
Gains and Losses				(196)	13	343		160

Source: PPTA Consultant.  
PV = present value

**Table 11: Distribution of Net Economic Benefits – Sa Pa (VND billion)**

Particulars	Financial PV	Economic PV	Econ PV less Fin PV	Government / Economy	Workers	Vehicle Operators	Passengers	Consumers /Public	Total
<b>All Subprojects</b>									
Revenue / Benefits	80	590	510			41	136	333	510
Costs									
Equipment and Materials	320	237	(82)	82					82
Labor	120	89	(31)		31				31
Other Cost	162	120	(42)	42					42
Net Benefits	(523)	143	665	(523)					(523)
Gains and Losses				(398)	31	41	136	333	143
<b>Wastewater and Drainage</b>									
Revenue / Benefits	80	276	196			-		196	196
Costs									
Equipment and Materials	131	97	(34)	34					34
Labor	51	38	(13)		13				13
Other Cost	75	55	(19)	19					19
Net Benefits	(176)	86	262	(176)					(176)
Gains and Losses				(124)	13	-		196	86
<b>Urban Roads</b>									
Revenue / Benefits	-	177	177			41	136		177
Costs									
Equipment and Materials	104	78	(27)	27					27
Labor	37	28	(10)		10				10
Other Cost	44	33	(11)	11					11
Net Benefits	(186)	39	225	(186)					(186)
Gains and Losses				(147)	10	41	136		39
<b>Town Center Enhancement</b>									
Revenue / Benefits	-	137	137			-		137	137
Costs									
Equipment and Materials	85	63	(22)	22					22
Labor	32	24	(8)		8				8
Other Cost	43	32	(11)	11					11
Net Benefits	(161)	18	179	(161)					(161)
Gains and Losses				(127)	8	-		137	18

Source: PPTA Consultant.  
PV = present value

**Table 12: Poverty Impact Ratio – Bac Giang (VND billion)**

Items	Government / Economy	Labor	Vehicle Operators	Passengers	Consumers	Total
<b>All Subprojects</b>						
Gains and losses		33	175	202	314	723
Financial return	(358)					(358)
Benefits (Losses)	(358)	33	175	202	314	365
Proportion of poor	0.35	0.50	0.30	0.30	0.40	
Benefits to poor	(125)	16	52	61	125	130
Poverty Impact Ratio						0.35
<b>Wastewater Improvement</b>						
Gains and losses		11	-		178	189
Financial return	(17)					(17)
Benefits (Losses)	(17)	11	-		178	172
Proportion of poor	0.35	0.50	-		0.30	
Benefits to poor	(6)	5	-		53	53
Poverty Impact Ratio						0.31
<b>Stormwater Improvement</b>						
Gains and losses		8	-		135	143
Financial return	(118)					(118)
Benefits (Losses)	(118)	8	-		135	25
Proportion of poor	0.30	0.35	-		0.30	
Benefits to poor	(35)	3	-		41	8
Poverty Impact Ratio						0.32
<b>Urban Roads</b>						
Gains and losses		14	175	202		392
Financial return	(224)					(224)
Benefits (Losses)	(224)	14	175	202		168
Proportion of poor	0.35	0.40	0.40	0.40		
Benefits to poor	(78)	6	70	81		78
Poverty Impact Ratio						0.47

Source: PPTA Consultant.



**Table 13: Poverty Impact – Mong Cai (VND billion)**

<b>Wastewater and Stormwater Drainage Improvement</b>					
<b>Items</b>	<b>Government / Economy</b>	<b>Labor</b>	<b>Public</b>	<b>Consumers</b>	<b>Total</b>
Gains and losses		32	343	225	600
Financial return	(378)				(378)
Benefits (Losses)	(378)	32	343	225	221
Proportion of poor	0.35	0.50	0.30	0.30	
Benefits to poor	(132)	16	103	67	54
Poverty Impact Ratio					0.24
<b>River Protection</b>					
Gains and losses		13	-	343	356
Financial return	(196)				(196)
Benefits (Losses)	(196)	13	-	343	160
Proportion of poor	0.35	0.50	-	0.35	
Benefits to poor	(69)	6	-	120	58
Poverty Impact Ratio					0.36

Source: PPTA Consultant.

**Table 14: Poverty Impact – Sa Pa (VND billion)**

Items	Government / Economy	Workers	Vehicle Operators	Passengers	Consumers/ Public	Total
Gains and losses		31	41	136	333	541
Financial return	(398)					(398)
Benefits (Losses)	(398)	31	41	136	333	143
Proportion of poor	0.35	0.50	0.30	0.30	0.40	
Benefits to poor	(139)	16	12	41	133	62
Poverty Impact Ratio						0.44
<b>Wastewater and Drainage</b>						
Gains and losses		13	-		196	209
Financial return	(124)					(124)
Benefits (Losses)	(124)	13	-		196	86
Proportion of poor	0.35	0.50	-		0.35	
Benefits to poor	(43)	7	-		69	32
Poverty Impact Ratio						0.37
<b>Urban Roads</b>						
Gains and losses		10	41	136		186
Financial return	(147)					(147)
Benefits (Losses)	(147)	10	41	136		39
Proportion of poor	0.35	0.50	0.30	0.40		
Benefits to poor	(52)	5	12	54		20
Poverty Impact Ratio						0.51
<b>Town Center Enhancement</b>						
Gains and losses		8	-		137	145
Financial return	(127)					(127)
Benefits (Losses)	(127)	8	-		137	18
Proportion of poor	0.35	0.50	-		0.35	
Benefits to poor	(45)	4	-		48	8
Poverty Impact Ratio						0.42

Source: PPTA Consultant.