

(Field Survey: June 2007)

Ex-post Monitoring Report

Evaluator: Atsushi Hashimoto (Maenam Advisory Co., Ltd.)

Project Name: Philippines “Revitalization of Main Line South Project” (L/A No. PH-P98)

Loan Outline

Loan Amount/Disbursed Amount : 5,054 million yen/ 5,037 million yen
 Loan Agreement : May 1989
 Final Disbursement Date : September 1996
 Ex-post Evaluation : FY1999
 Executing Agency : Philippine National Railways (PNR)

Project Objective

The objective is to improve the operating conditions, convenience and comfort of train service by carrying out procurement and rehabilitation of the concerned tracks, bridges, and rolling stocks on 443 km from San Pedro which lies south of metro Manila to Legaspi on the southern tip of Luzon Island, and thereby contribute to the provision of a safe and inexpensive means of mass transit for users and to the economic development of the region.

Consultant: Pacific Consultants International and others

Contractor: JOHN HOLLAND CONSTRUCTION PTV.LTD. (Australia), Mitsui & Co., Ltd., and others

Overview of Results

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring
Effectiveness and Impact Effectiveness	<p>The initial scope of this project covered many areas including (1) track improvement of the 443 km between San Pedro and Legaspi, (2) bridge rehabilitation (10 bridges), (3) procurement of 6 locomotives and rehabilitation of 67 passenger cars and 5 locomotives, (4) rehabilitation of 28 station facilities, (5) procurement of communication equipment (15 sets of VHF transceivers, 378 km of cable circuits), (6) installation of signal devices, and (7) installation of a fence to prevent trespassing on the tracks. After alteration, the actual scope was (1) reduction of track improvement to 245 km between Lucena and Naga, (2) rehabilitation of 7 bridges, and (3) procurement of 6 diesel-electric locomotives and rehabilitation of 16 passenger cars. (4), (6), and (7) were eliminated. (5) VHF transceivers and SSB transceivers were procured instead of cable circuits.</p>	<div style="border: 1px solid black; padding: 5px;"> <p>From the time of the evaluation until the present, while there were fluctuations year to year, the service record of PNR’s Main Line South has declined, and in recent years, it has declined steeply. Furthermore, since September 2006, service has been suspended due to typhoon damage. So, at the time of the monitoring, the project’s effectiveness was not being maintained.</p> </div> <p>(1) Railway service The track and bridges of the Main Line South were damaged between Manila and Naga by a typhoon in September 2006 and became impassable except for the</p>

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring																																				
	<p>(1) Railway service</p> <p>a) As shown on Table 1 below, the number of round-trips has not increased since the time of the appraisal. Moreover, the required traveling time has not reached the target of 6 hours; however, smoother service is possible due to track improvement, the time required from Manila to Naga was shortened by 4 hours, from 15 hours to 11 hours.</p> <p style="text-align: center;">Table 1: Main Line South Operating Conditions (Manila-Naga)</p> <table><tr><th></th><th>Actual Figures at the Time of Appraisal(1988)</th><th>Plan</th><th>At the Time of Ex-post Evaluation (February 2000)</th></tr><tr><td>Full speed</td><td>35~40km/h</td><td>100km/h</td><td>70km/h</td></tr><tr><td>Required traveling time</td><td>15 hours</td><td>6 hours</td><td>11 hours</td></tr><tr><td>Number of round-trips in operation</td><td>2</td><td>5</td><td>2</td></tr></table> <p>Source: JBIC, PNR</p> <p>(2) Transport of Passengers and Cargo Freight in the Main Line South</p> <p>As stated below, the amount of passengers and cargo freight has declined since the time of the appraisal (1988). (An analysis of the detailed reasons for the decline was not performed at the time of appraisal.)</p> <p><u>Passenger transport (1988, time of appraisal)</u></p> <ul style="list-style-type: none">• No. of passengers: 984,885 persons• Passenger transport volume 230,075 thousand person/km• Revenue: 64,768 thousand pesos <p><u>Cargo transport (1988, time of appraisal)</u></p> <ul style="list-style-type: none">• <u>Cargo transport</u> volume: 20,547 thousand tons/km• Revenue: 18,634 thousand pesos <p><u>Passenger transport (1999, time of ex-post evaluation)</u></p>		Actual Figures at the Time of Appraisal(1988)	Plan	At the Time of Ex-post Evaluation (February 2000)	Full speed	35~40km/h	100km/h	70km/h	Required traveling time	15 hours	6 hours	11 hours	Number of round-trips in operation	2	5	2	<p>commuter line. At the current point in time, there is no service on the long-distance line from Calamba, the final station on the commuter line, to Legaspi (including this project’s target segment (Lucena to Naga)). Subsequently the track damage was worsened by a typhoon in November making restoration of service even more difficult.</p> <p>-Reference:</p> <p>There are 6 trains/day on the 28 km Manila-Alabang commuter line segment (not targeted by this project), and 1 train/day on the 56 km Manila- Calamba (which lies beyond Alabang) segment. During the field observations, the evaluator rode on the Manila-Alabang segment. Illegal settlers occupy the area along the tracks and so the trains are forced to travel slowly. In some areas (about 2 km), the trains can travel at 60 km/hr, but in other areas the speed is 30-40 km/hr. The time required to travel the 28 km from Manila to Alabang was 1 hour 40 minutes. There are areas where the track condition is bad and the train cars shake widely from side to side. The inside of the cars is not well cleaned. Windows are covered with iron bars to prevent damage from thrown rocks. Scratches from thrown rocks are apparent on the train car bodies.</p> <p>(2) Transport of Passengers and Cargo Freight in the Main Line South</p> <p>Long-distance lines (passenger service): Transport figures were in a downtrend prior to suspension of service in September 2006. The reason was the drop in transport capacity due to typhoon damage with occurred annually, inadequate track repair, and aged train cars. The 2006 figures are approximately 1/3 of the 1999 figures. Moreover, in terms of transport capacity (total seats-km), 2006 was 25% of 1999, and so the decline in capacity is striking.</p> <p style="text-align: center;">Table 1: Long-Distance Line (passenger service) Figures</p> <table><tr><th></th><th>1999</th><th>2000</th><th>2001</th><th>2002</th></tr><tr><td>Number of running trains (trains)</td><td>1,432</td><td>1,340</td><td>1,399</td><td>1,450</td></tr><tr><td>Annual distance traveled (km)</td><td>669,326</td><td>612,293</td><td>656,415</td><td>685,670</td></tr><tr><td>Total</td><td>323,168</td><td>244,581</td><td>229,862</td><td>222,665</td></tr></table>		1999	2000	2001	2002	Number of running trains (trains)	1,432	1,340	1,399	1,450	Annual distance traveled (km)	669,326	612,293	656,415	685,670	Total	323,168	244,581	229,862	222,665
		Actual Figures at the Time of Appraisal(1988)	Plan	At the Time of Ex-post Evaluation (February 2000)																																		
	Full speed	35~40km/h	100km/h	70km/h																																		
	Required traveling time	15 hours	6 hours	11 hours																																		
	Number of round-trips in operation	2	5	2																																		
		1999	2000	2001	2002																																	
	Number of running trains (trains)	1,432	1,340	1,399	1,450																																	
	Annual distance traveled (km)	669,326	612,293	656,415	685,670																																	
	Total	323,168	244,581	229,862	222,665																																	

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring				
<ul style="list-style-type: none"> No. of passengers: 540,914 persons Passenger transport volume 172,327 thousand person/km Revenue: 87,636 thousand pesos <u>Cargo transport (1999, time of ex-post evaluation)</u> <ul style="list-style-type: none"> <u>Cargo transport</u> volume: 943 thousand tons/km Revenue: n.a. (Note: Revenue in 1998 was 5,646 thousand pesos.) 		seats-km (1,000)				
		Number of passengers (persons)	606,802	437,720	347,710	281,594
		Seats filled (%)	59.14	56.37	47.64	39.83
			2003	2004	2005	2006
		Number of running trains (trains)	671	1,337	439	534
		Annual distance traveled (km)	318,806	634,554	208,780	252,058
		Total seats-km (1,000)	134,734	189,000	63,159	79,358
		Number of passengers (persons)	241,790	257,455	62,710	125,154
		Seats filled (%)	56.53	42.91	31.27	49.67
		Seats filled= (number of passengers x315)/total seats-km. 315 km is the average distance traveled by a passenger. Source: PNR -Reference: Figures for the commuter line are also in a downtrend. The 2006 figures (for number of running trains) are approximately half of the 1999 figure. There is a downtrend in the number of passengers; however, as there are over 2 million passengers annually and the number has remained basically unchanged for the past 4 years, the decline has leveled off. It is planned to implement an improvement project for the commuter line with the assistance of South Korea (to install double tracks on some lines, improve tracks, and procure rolling stocks). Design has already begun. The civil engineering and track improvement depends on the removal of the illegal				

Item	At the Time of Ex-Post Evaluation					At the Time of Ex-Post Monitoring																																																																																																								
	<p>(3) Condition of locomotives and passenger coaches</p> <p>The average congestion rate for trains traveling on the Main Line South is high, but as shown below, there is a shortage of locomotives and passenger coaches. The lack of passenger coaches is a particularly serious problem. Therefore, a Japanese railway company donated 21 used passenger coaches to PNR in late 1999 with the initiative of a JICA specialist.</p> <p>Table 2: Condition of Locomotives and Passenger Coaches</p> <table><tr><th></th><th colspan="2">Overall PNR(1986)</th><th colspan="2">Overall PNR(2000)</th></tr><tr><th></th><th>Diesel-electric locomotives</th><th>Passenger Coaches</th><th>Diesel-electric locomotives</th><th>Passenger Coaches</th></tr><tr><td>Under operation</td><td>24</td><td>41</td><td>14</td><td>19</td></tr><tr><td>(Operating ratio)</td><td>39%</td><td>26%</td><td>33%</td><td>15%</td></tr><tr><td>Under repair</td><td>11</td><td>22</td><td>13</td><td>27</td></tr><tr><td>Waiting to be repaired</td><td>27</td><td>95</td><td>9</td><td>24</td></tr><tr><td>Cannot be repaired</td><td>N.A.</td><td>N.A.</td><td>6</td><td>59</td></tr><tr><td>Total</td><td>62</td><td>158</td><td>42</td><td>129</td></tr></table> <p>Source: PNR</p> <p>Furthermore, train service continues to suffer in comparison with bus service in terms of the required travel time and the number of trips as shown on the table below. Bus transport has enjoyed shorter traveling times and better efficiency due to ongoing rehabilitation of the national roads. Both train transport and bus transport still have high congestion rates. The Main Line South is still the cheaper alternative and offers a more comfortable ride as passengers can get up and move about the coaches. Therefore it is assumed that there is a large latent demand for train travel. If train traveling times can be shortened and if more trips can be offered, then it is assumed that more passengers will shift from buses to trains.</p>						Overall PNR(1986)		Overall PNR(2000)			Diesel-electric locomotives	Passenger Coaches	Diesel-electric locomotives	Passenger Coaches	Under operation	24	41	14	19	(Operating ratio)	39%	26%	33%	15%	Under repair	11	22	13	27	Waiting to be repaired	27	95	9	24	Cannot be repaired	N.A.	N.A.	6	59	Total	62	158	42	129	<p>settlers. It is expected that an improvement project will be implemented with the assistance of China for the long-distance line from Calamba south to Lucena</p> <p>Table 2: Commuter Line (passenger service) Figures</p> <table><tr><th></th><th>1999</th><th>2000</th><th>2001</th><th>2002</th></tr><tr><td>Number of running trains (trains)</td><td>9,798</td><td>5,845</td><td>7,269</td><td>7,362</td></tr><tr><td>Annual distance traveled (km)</td><td>312,756</td><td>199,236</td><td>252,803</td><td>251,883</td></tr><tr><td>Total seats-km (1,000)</td><td>117,676</td><td>82,181</td><td>101,761</td><td>99,147</td></tr><tr><td>Number of passengers (persons)</td><td>3,902,065</td><td>2,307,721</td><td>2,893,614</td><td>2,674,701</td></tr><tr><td>Seats filled (%)</td><td>46.42</td><td>39.31</td><td>39.80</td><td>37.76</td></tr><tr><th></th><th>2003</th><th>2004</th><th>2005</th><th>2006</th></tr><tr><td>Number of running trains (trains)</td><td>6,189</td><td>6,925</td><td>5,701</td><td>4,997</td></tr><tr><td>Annual distance traveled (km)</td><td>216,547</td><td>239,941</td><td>177,182</td><td>173,618</td></tr><tr><td>Total seats-km (1,000)</td><td>78,916</td><td>87,126</td><td>77,061</td><td>62,050</td></tr><tr><td>Number of passengers (persons)</td><td>2,247,446</td><td>2,351,795</td><td>2,260,604</td><td>2,294,106</td></tr><tr><td>Seats filled (%)</td><td>39.87</td><td>37.79</td><td>41.07</td><td>51.76</td></tr></table> <p>Seats filled= (number of passengers x14)/total seats-km. 14 km is the average</p>						1999	2000	2001	2002	Number of running trains (trains)	9,798	5,845	7,269	7,362	Annual distance traveled (km)	312,756	199,236	252,803	251,883	Total seats-km (1,000)	117,676	82,181	101,761	99,147	Number of passengers (persons)	3,902,065	2,307,721	2,893,614	2,674,701	Seats filled (%)	46.42	39.31	39.80	37.76		2003	2004	2005	2006	Number of running trains (trains)	6,189	6,925	5,701	4,997	Annual distance traveled (km)	216,547	239,941	177,182	173,618	Total seats-km (1,000)	78,916	87,126	77,061	62,050	Number of passengers (persons)	2,247,446	2,351,795	2,260,604	2,294,106	Seats filled (%)	39.87	37.79	41.07	51.76
							Overall PNR(1986)		Overall PNR(2000)																																																																																																					
							Diesel-electric locomotives	Passenger Coaches	Diesel-electric locomotives	Passenger Coaches																																																																																																				
						Under operation	24	41	14	19																																																																																																				
						(Operating ratio)	39%	26%	33%	15%																																																																																																				
						Under repair	11	22	13	27																																																																																																				
						Waiting to be repaired	27	95	9	24																																																																																																				
						Cannot be repaired	N.A.	N.A.	6	59																																																																																																				
						Total	62	158	42	129																																																																																																				
							1999	2000	2001	2002																																																																																																				
	Number of running trains (trains)	9,798	5,845	7,269	7,362																																																																																																									
	Annual distance traveled (km)	312,756	199,236	252,803	251,883																																																																																																									
	Total seats-km (1,000)	117,676	82,181	101,761	99,147																																																																																																									
	Number of passengers (persons)	3,902,065	2,307,721	2,893,614	2,674,701																																																																																																									
	Seats filled (%)	46.42	39.31	39.80	37.76																																																																																																									
		2003	2004	2005	2006																																																																																																									
	Number of running trains (trains)	6,189	6,925	5,701	4,997																																																																																																									
	Annual distance traveled (km)	216,547	239,941	177,182	173,618																																																																																																									
	Total seats-km (1,000)	78,916	87,126	77,061	62,050																																																																																																									
	Number of passengers (persons)	2,247,446	2,351,795	2,260,604	2,294,106																																																																																																									
Seats filled (%)	39.87	37.79	41.07	51.76																																																																																																										

Item	At the Time of Ex-Post Evaluation					At the Time of Ex-Post Monitoring			
	Table 3: Comparison with Buses (Manila-Naga)					distance traveled by a passenger. Source: PNR			
		At the time of Appraisal		February 2002					
		Main Line South	Bus	Main Line South	Bus				
	Required traveling time	15 Hours	9 Hours	11Hours	8 Hours				
	Fare (economy)	93.9 pesos	115.5 pesos	169 pesos	266 pesos				
	Fare (air-conditioned)	140 pesos	147.6 pesos	234 pesos	342 pesos				
	Number of round trips in operation	2	35	2	n.a. (multiple)				
	Congestion rate	N.A.	N.A.	Economy 75% Air-condit ioned 100%	Seats nearly full				
Source: PNR materials and interviews					(3) Condition of locomotives and passenger coaches All of the current passenger coaches were donated by Japan Railway. It can be seen that the number of locomotives and passenger coaches under operation has decreased compared to the time of the evaluation and that the decline in transport capacity is striking.				
					Table 3: Condition of Locomotives, Passenger Coaches, and Freight Cars (June 2007)				
						Locomotive	Passenger Coaches	Freight Cars	
					Under operation	11	10	147	
					(Operating ratio)	64.7	41.7%	99.3	
					Under repair	6	3	1	
					Waiting to be repaired	0	11	0	
					Cannot be repaired	0	3	0	
					Source: PNR				
					(4) Comparison with bus service There is no change in the fact that train service continues to suffer in comparison with bus service. Table 3 shows a comparison with bus service on the Manila-Lucena route and the Manila-Naga route. Both Lucena and Naga have large, well-equipped bus terminals. The number of buses in operation depends on the passenger demand, but on every route there are multiple operators providing service from early				

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring																														
		<p>morning until late at night. Each operator has buses bound for Manila departing every 20 minutes. The number of trains in operation on the Main South Line shown on the table is the number prior to September 2006; currently service is suspended.</p> <p>Prior to September 2006, the number of trains in operation on the railway targeted by this project was overwhelmingly few compared to the number of buses in operation and so trains were inconvenient. The speed was slow and inferior to buses in terms of travel time. However, because the fare is cheap, school and work commuters who ride daily and long-distance travelers use trains because they seem relatively less expensive. Because service on the long-distance line is suspended, no judgment can be made concerning comfort at the current point in time.</p> <p>As stated above, under the current situation, railway fares are attractive, but the railway is far behind buses when it comes to convenience and travel time. The situation is that people “ride the railway because it’s cheap” but “would not be bothered if there were no railway.” While it’s not the case that there is no demand, demand is not high.</p> <p style="text-align: center;">Table 3: Comparison with Buses</p> <table><tr><th></th><th colspan="2">Manila-Lucena</th><th colspan="2">Manila-Naga</th></tr><tr><th></th><th>Main Line South</th><th>Bus</th><th>Main Line South</th><th>Bus</th></tr><tr><td>Required traveling time</td><td>3 hours 30 minutes</td><td>2 hours 30 minutes</td><td>11 hours</td><td>8 hours</td></tr><tr><td>Fare (economy)</td><td>79</td><td>137</td><td>223</td><td>350</td></tr><tr><td>Fare (air-conditioned)</td><td>103</td><td>191</td><td>291</td><td>540</td></tr><tr><td>Number of round trips in operation</td><td>1</td><td>200+</td><td>1</td><td>200+</td></tr></table> <p>Source: PNR (for railway figures), Interviews at Lucena and Naga bus terminals (for bus figures).</p> <p>(5) Internal rate of return</p>		Manila-Lucena		Manila-Naga			Main Line South	Bus	Main Line South	Bus	Required traveling time	3 hours 30 minutes	2 hours 30 minutes	11 hours	8 hours	Fare (economy)	79	137	223	350	Fare (air-conditioned)	103	191	291	540	Number of round trips in operation	1	200+	1	200+
	Manila-Lucena		Manila-Naga																													
	Main Line South	Bus	Main Line South	Bus																												
Required traveling time	3 hours 30 minutes	2 hours 30 minutes	11 hours	8 hours																												
Fare (economy)	79	137	223	350																												
Fare (air-conditioned)	103	191	291	540																												
Number of round trips in operation	1	200+	1	200+																												

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring																																																																																																															
	(4) Internal rate of return FIRR: Not calculated	Not calculated																																																																																																															
Impact	(1) Improvement of railway safety The track improvement carried out by this project contributed to a reduction in the number of derailments. As shown on the table below, the annual cases of derailment have decreased compared to prior to the start of the project.	(1) Improvement of railway safety The number of accidents is decreasing, but the main reason for this is that the number of trains in operation is decreasing. The accident rate, which is fluctuating around 2% per each train in operation, remains unchanged. There are many collisions at railway crossings, and steps are being taken to install warning signs.																																																																																																															
	Table 4: Annual Number of Derailments (Lucena-Naga)	Table 4: Accidents																																																																																																															
	<table><tr><th>Year</th><th>No. of derailments</th><th>Year</th><th>No. of derailments</th></tr><tr><td>1990</td><td>44</td><td>1995</td><td>16</td></tr><tr><td>1991</td><td>37</td><td>1996</td><td>16</td></tr><tr><td>1992</td><td>58</td><td>1997</td><td>6</td></tr><tr><td>1993</td><td>47</td><td>1998</td><td>10</td></tr><tr><td>1994</td><td>21</td><td>1999</td><td>20</td></tr></table> <p>Source: PNR</p>	Year	No. of derailments	Year	No. of derailments	1990	44	1995	16	1991	37	1996	16	1992	58	1997	6	1993	47	1998	10	1994	21	1999	20	<table><tr><th></th><th>2000</th><th>2001</th><th>2002</th><th>2003</th><th>2004</th><th>2005</th><th>2006</th></tr><tr><td>Derailment</td><td>84</td><td>60</td><td>97</td><td>51</td><td>65</td><td>30</td><td>31</td></tr><tr><td>Crossing accident</td><td>51</td><td>62</td><td>49</td><td>36</td><td>58</td><td>27</td><td>20</td></tr><tr><td>Collision (with cars)</td><td>50</td><td>45</td><td>53</td><td>31</td><td>45</td><td>27</td><td>22</td></tr><tr><td>Thrown rocks</td><td>59</td><td>52</td><td>39</td><td>24</td><td>18</td><td>24</td><td>31</td></tr><tr><td>Other</td><td>30</td><td>23</td><td>13</td><td>3</td><td>15</td><td>0</td><td>18</td></tr><tr><td>Accidents/trains in operation</td><td>0.038</td><td>0.028</td><td>0.028</td><td>0.021</td><td>0.024</td><td>0.018</td><td>0.022</td></tr><tr><td>Service suspended</td><td>1914</td><td>446</td><td>796</td><td>1243</td><td>914</td><td>451</td><td>527</td></tr><tr><td>Service suspension rate (%)</td><td>26.6</td><td>5.1</td><td>9.0</td><td>18.1</td><td>11.0</td><td>6.8</td><td>9.5</td></tr><tr><td>Locomotive failure</td><td>111</td><td>100</td><td>139</td><td>75</td><td>114</td><td>34</td><td>81</td></tr><tr><td>Part/rolling stock failure</td><td>0</td><td>71</td><td>75</td><td>43</td><td>67</td><td>21</td><td>71</td></tr></table> <p>Source: PNR</p>		2000	2001	2002	2003	2004	2005	2006	Derailment	84	60	97	51	65	30	31	Crossing accident	51	62	49	36	58	27	20	Collision (with cars)	50	45	53	31	45	27	22	Thrown rocks	59	52	39	24	18	24	31	Other	30	23	13	3	15	0	18	Accidents/trains in operation	0.038	0.028	0.028	0.021	0.024	0.018	0.022	Service suspended	1914	446	796	1243	914	451	527	Service suspension rate (%)	26.6	5.1	9.0	18.1	11.0	6.8	9.5	Locomotive failure	111	100	139	75	114	34	81	Part/rolling stock failure	0	71	75	43	67	21
Year	No. of derailments	Year	No. of derailments																																																																																																														
1990	44	1995	16																																																																																																														
1991	37	1996	16																																																																																																														
1992	58	1997	6																																																																																																														
1993	47	1998	10																																																																																																														
1994	21	1999	20																																																																																																														
	2000	2001	2002	2003	2004	2005	2006																																																																																																										
Derailment	84	60	97	51	65	30	31																																																																																																										
Crossing accident	51	62	49	36	58	27	20																																																																																																										
Collision (with cars)	50	45	53	31	45	27	22																																																																																																										
Thrown rocks	59	52	39	24	18	24	31																																																																																																										
Other	30	23	13	3	15	0	18																																																																																																										
Accidents/trains in operation	0.038	0.028	0.028	0.021	0.024	0.018	0.022																																																																																																										
Service suspended	1914	446	796	1243	914	451	527																																																																																																										
Service suspension rate (%)	26.6	5.1	9.0	18.1	11.0	6.8	9.5																																																																																																										
Locomotive failure	111	100	139	75	114	34	81																																																																																																										
Part/rolling stock failure	0	71	75	43	67	21	71																																																																																																										
	(2) Development of regional economies No information or data	(2) Development of regional economies According to PNR, users appreciate the railway as a cheap means of transportation, and PNR is hearing requests for resumption of service on the Main Line South. However since it is possible to use buses, it seems that people would not feel inconvenienced even if the stoppage of service become permanent.																																																																																																															

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring
	<p>(3) Environmental impact No negative impact on the environment has been reported.</p>	<p>(3) Environmental impact There is no negative impact on the environment.</p>
Sustainability	<p>(1) Technical capacity In this project and the “Railcar Maintenance Depot Construction Project”,¹ have promoted preventative maintenance (thorough inspections and maintenance to prevent faults from occurring) through expert instruction by consultants and through the creation of manuals. There have been great expectations for this type of transfer of technology, but this preventative maintenance has not always been carried out by PNR. At the time of the appraisal JBIC was aware of the necessity of improving PNR’s maintenance scheme and several measures were taken. However, these did not last over the long term.</p> <p>(2) O&M system The executing agency’s management system is fragile. The Philippine government is studying plans for improving PNR management by bringing in the private sector and taking other measures. In this manner it hopes to drastically reform PNR management and services.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>The Philippine government does not have the budget to restore national railway service which is stopped, and the stoppage has been continuing for one year. However, even if service is restored, it appears that improvement of service will be difficult due to lack of technicians, aged facilities and equipment, and insufficient operation and maintenance budget. The sustainability of this project has not been secured.</p> </div> <p>(1) Technical capacity PNR is not implementing preventative maintenance of service facilities and rolling stock. There is PNR staff to secure the current operating level, but since their age is becoming advanced, the quality of operation and maintenance is beginning to drop.</p> <p>(2) O&M system There has been no change in PNR’s O&M system since the time of evaluation. Although PNR is endeavoring to maintain service, it has been unable to do so, and in that sense, the O&M system may be called fragile. Under one General Manager (GM), there are three Assistant GMs (AGM). They are in charge of administration and finance, service, real estate management and use, respectively. When there is a special project (such as this yen loan project and the South Korea assistance project), an AGM Special Project is appointed. At the end of 2005, there were 1,429 regular employees and 1,700 total when temporary employees were included. The current number is approximately 200 fewer employees. As stated below under “O&M status,” there are departments where there is clearly a shortage of personnel, and in that sense, it may be said that PNR’s O&M system is inadequate. During the ex-post monitoring, material to make a judgment on whether or not the overall system is unsatisfactory could not be obtained.</p>

¹ Loan agreement signed in September 1983. Loan amount: 4,500 million yen. This project included the construction of the rolling stock maintenance depot, the procurement of locomotives and spare parts, and the provision of consulting services (including management assistance).

Item	At the Time of Ex-Post Evaluation						At the Time of Ex-Post Monitoring																																																																																																																																																													
	<p>(3) Financial status</p> <p>PNR’s Statement of Income at the time of the appraisal and at the time of the ex-post evaluation is shown on the table below. Every year, there have been operating losses and net losses. Subsidies are supplemented, but even so deficits continue on a net basis and operations are stagnant. Furthermore, the subsidies are in a downtrend, and PNR is endeavoring to obtain income other than from railway operation, such as rental and sale of assets such as land.</p> <p>Table 5: Statements of Income for PNR (Unit: 1,000 peso)</p> <table><tr><td></td><td>1987</td><td>1994</td><td>1995</td><td>1996</td><td>1997</td><td>1998</td></tr><tr><td>Operating revenues</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Railway business revenue</td><td>86,762</td><td>64,369</td><td>85,487</td><td>38,052</td><td>105,553</td><td>117,713</td></tr><tr><td>Others (hospital management, etc.)</td><td>4,405</td><td>5,022</td><td>8,953</td><td>11,344</td><td>13,579</td><td>11,561</td></tr><tr><td>Subtotal</td><td>91,167</td><td>69,391</td><td>94,440</td><td>49,396</td><td>119,132</td><td>129,274</td></tr><tr><td>Operating Expenses</td><td>118,224</td><td>186,020</td><td>229,826</td><td>258,951</td><td>319,132</td><td>377,847</td></tr><tr><td>Personnel</td><td>26,220</td><td>18,428</td><td>19,285</td><td>14,632</td><td>20,410</td><td>22,716</td></tr><tr><td>Fuel and lubricants</td><td>27,920</td><td>27,962</td><td>43,012</td><td>51,428</td><td>58,584</td><td>60,769</td></tr><tr><td>Maintenance & other operating expenses</td><td>172,364</td><td>232,410</td><td>292,123</td><td>325,011</td><td>398,126</td><td>461,332</td></tr><tr><td>Subtotal</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>							1987	1994	1995	1996	1997	1998	Operating revenues							Railway business revenue	86,762	64,369	85,487	38,052	105,553	117,713	Others (hospital management, etc.)	4,405	5,022	8,953	11,344	13,579	11,561	Subtotal	91,167	69,391	94,440	49,396	119,132	129,274	Operating Expenses	118,224	186,020	229,826	258,951	319,132	377,847	Personnel	26,220	18,428	19,285	14,632	20,410	22,716	Fuel and lubricants	27,920	27,962	43,012	51,428	58,584	60,769	Maintenance & other operating expenses	172,364	232,410	292,123	325,011	398,126	461,332	Subtotal							<p>According to a NEDA resolution dated February 10, 2003, a policy decision was made to restructure PNR. Personnel reduction and restructuring: The proposal is that personnel will be reduced from the current 1,500 to 560, AGMs will be reduced from 3 to 2, and real estate management will be absorbed into administration and finance. In the resolution, there is reference to usage of the private sector in railway service, but it is not clear specifically in what form PNR will be brought back to life. It has already been decided to outsource the hospital operated by the executing agency.</p> <p>(3) Financial status</p> <p>There has been no change in PNR’s financial status since the time of appraisal, and the deficit is chronic. For each of the past three years an operating loss of over 300 million pesos and a pre-tax loss of 7 to 10 million pesos have been posted.</p> <p>Since the budget shortfall is such that there is even a shortage of fuel, it is not possible to procure the spare parts needed for rolling stock maintenance. Late payments of salaries also occur.</p> <p>Real estate assets are being rented and sold, but this has had scant effect on improving the financial status.</p> <p>Table 5: Statements of Income for PNR (Unit: 1,000 peso)</p> <table><tr><td></td><td>2000</td><td>2001</td><td>2002</td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr><tr><td>Operating revenues</td><td>95684</td><td>108859</td><td>96537</td><td>90279</td><td>83496</td><td>43300</td><td>57825</td></tr><tr><td>Passenger</td><td>67758</td><td>66039</td><td>55583</td><td>55555</td><td>51755</td><td>11113</td><td>27610</td></tr><tr><td>Freight</td><td>4964</td><td>4973</td><td>5189</td><td>3735</td><td>3287</td><td>1324</td><td>2141</td></tr><tr><td>Commuter line</td><td>18160</td><td>31810</td><td>30079</td><td>26997</td><td>25570</td><td>28597</td><td>26374</td></tr><tr><td>Hospital service</td><td>4802</td><td>6037</td><td>5686</td><td>3992</td><td>2884</td><td>2266</td><td>1700</td></tr><tr><td>Operating Expenses</td><td>436245</td><td>483281</td><td>529512</td><td>419838</td><td>416988</td><td>376880</td><td>388475</td></tr><tr><td>Personnel</td><td>359685</td><td>389954</td><td>367252</td><td>346539</td><td>311539</td><td>274410</td><td>289909</td></tr><tr><td>Fuel</td><td>26564</td><td>37879</td><td>37190</td><td>37069</td><td>35299</td><td>36084</td><td>48360</td></tr><tr><td>Operation</td><td>40335</td><td>53284</td><td>109007</td><td>28830</td><td>51817</td><td>42376</td><td>49708</td></tr></table>									2000	2001	2002	2003	2004	2005	2006	Operating revenues	95684	108859	96537	90279	83496	43300	57825	Passenger	67758	66039	55583	55555	51755	11113	27610	Freight	4964	4973	5189	3735	3287	1324	2141	Commuter line	18160	31810	30079	26997	25570	28597	26374	Hospital service	4802	6037	5686	3992	2884	2266	1700	Operating Expenses	436245	483281	529512	419838	416988	376880	388475	Personnel	359685	389954	367252	346539	311539	274410	289909	Fuel	26564	37879	37190	37069	35299	36084	48360	Operation	40335	53284	109007	28830	51817	42376	49708
								1987	1994	1995	1996	1997	1998																																																																																																																																																							
							Operating revenues																																																																																																																																																													
							Railway business revenue	86,762	64,369	85,487	38,052	105,553	117,713																																																																																																																																																							
							Others (hospital management, etc.)	4,405	5,022	8,953	11,344	13,579	11,561																																																																																																																																																							
							Subtotal	91,167	69,391	94,440	49,396	119,132	129,274																																																																																																																																																							
							Operating Expenses	118,224	186,020	229,826	258,951	319,132	377,847																																																																																																																																																							
							Personnel	26,220	18,428	19,285	14,632	20,410	22,716																																																																																																																																																							
							Fuel and lubricants	27,920	27,962	43,012	51,428	58,584	60,769																																																																																																																																																							
							Maintenance & other operating expenses	172,364	232,410	292,123	325,011	398,126	461,332																																																																																																																																																							
Subtotal																																																																																																																																																																				
	2000	2001	2002	2003	2004	2005	2006																																																																																																																																																													
Operating revenues	95684	108859	96537	90279	83496	43300	57825																																																																																																																																																													
Passenger	67758	66039	55583	55555	51755	11113	27610																																																																																																																																																													
Freight	4964	4973	5189	3735	3287	1324	2141																																																																																																																																																													
Commuter line	18160	31810	30079	26997	25570	28597	26374																																																																																																																																																													
Hospital service	4802	6037	5686	3992	2884	2266	1700																																																																																																																																																													
Operating Expenses	436245	483281	529512	419838	416988	376880	388475																																																																																																																																																													
Personnel	359685	389954	367252	346539	311539	274410	289909																																																																																																																																																													
Fuel	26564	37879	37190	37069	35299	36084	48360																																																																																																																																																													
Operation	40335	53284	109007	28830	51817	42376	49708																																																																																																																																																													

Item	At the Time of Ex-Post Evaluation							At the Time of Ex-Post Monitoring							
	Operating profit	-81,197	-163,019	-197,683	-275,615	-278,994	-332,058	and maintenance							
	Non-operating revenue	52,060	72,651	57,424	74,653	72,612	83,480	Other	9661	2164	16063	7400	18333	23710	498
	Real estate rentals	1,088	11,006	15,749	4,680	7,381	3,981	Operating	-340561	-374422	-432975	-329559	-333492	-333580	-330650
	Others	53,148	83,657	73,173	79,333	79,993	87,461	profit							
	Subtotal							Non-operating revenue	79233	127032	127471	91719	98014	142572	109968
	Non-operating expenses	89,717	99,519	100,775	98,766	99,344	99,461	Non-operating expenses	584998	664016	623434	620060	1087938	104728	542338
	Interest expenses, etc.	-	63,225	375,708	265,987	329,914	651,243	Pre-tax profit	-846336	-911406	-928938	-857900	-1323416	-295736	-763020
	Depreciation							Source: PNR							
	Subtotal							(4) O&M status							
	Net income (without subsidy)	-117,766	-241,892	-603,821	-554,758	-644,051	-1,000,904	a) Maintenance of locomotives and passenger coaches							
	Subsidies	108,700	307,102	439,570	262,977	236,608	135,580	There has been no change in PNR's O&M status since the time of evaluation, and repairs of rolling stocks tend to be delayed due to lack of spare parts.							
	Net Income (with subsidy)	-9,066	65,210	-164,251	-291,781	-407,443	865,324	Currently the Main Line South is not in operation, but operation and maintenance is being conducted, such as running the engines of the locomotives for engine maintenance. However, starting and running of the engines is not being done as many times as specified in the maintenance rules to save money due to soaring fuel prices							
	Source: PNR							b) Track maintenance							
	(4) O&M status							Track maintenance should be performed by one maintenance team for each 2.5 km of the commuter line and each 5 km of the Main Line South. Since each team should consist of 5 members and there are 99 segments between Manila and Legaspi, 495 maintenance staff members are required. The actual number assigned is 217, with 1 to 3 members on each maintenance team. On lines that are actually in operation, it seems that 5 maintenance staff members for each team are too many, however on the railway targeted by this project which is over 400 km, even through operations are stopped, the current 1 to 3 members per team is not too many considering that patrols should be conducted to prevent entry by illegal settlers and theft of equipment and materials and considering that							
	a) Maintenance of locomotives and passenger coaches														
	Maintenance of locomotives and passenger coaches is carried out by the Locomotive Maintenance Unit, the Long-Distance Passenger Car Maintenance Unit, and the Commuter Passenger Coaches Maintenance Unit within the Rolling Stock Maintenance Department (240 employees). At the time of the ex-post evaluation, there have been difficulties in procuring spare parts due to the financial restraints and repairs to broken rolling stocks have had to be postponed.														
	b) Track maintenance														
	Track maintenance (including bridges) is implemented by a total of 200 employees belonging to the four regions of Manila, Lucena, Hondagua, and Naga. Work is assigned on a daily and weekly basis, and operation and maintenance is carried out. However, maintenance of drainage ditches and cleaning of the track itself (cutting grass, etc.) is inadequate. There are concerns that the condition of the tracks will continue to worsen if this maintenance situation continues.														

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring
		<p>maintenance should be conducted to prepare for operation. Moreover, it cannot be said the operation and maintenance condition is satisfactory given the lack of rolling stocks for operation and maintenance purposes.</p> <p>-Condition of equipment and materials purchased with loan On the Main Line South, operation of the long-distance line is currently suspended. The still relatively usable rails, ballast, and ties have been removed and are being used for operation and maintenance of the commuter line. Communications equipment at Legaspi Station has been removed, and the existence of communications equipment at Lucena and Naga could not be confirmed.</p>
<p>Lessons Learned, Recommendations, Information Resources, and Monitoring Methods</p> <p>(1) Follow-up on lessons learned and recommendations made in ex-post evaluation report or in later evaluations</p> <p>(2) Proposals for securing sustainability and instructions given at the</p>	None	<div data-bbox="1243 635 2072 805" style="border: 1px solid black; padding: 5px;"> <p>The Philippine government has no visible strong intention to maintain the national railway. Considering that the people do not rely on PNR as a means of transportation, PNR's financial status, and its operation and maintenance capacity, no need is felt to maintain and continue the existing framework.</p> </div> <p>(1) There were no lessons learned or recommendations at the time of the project evaluation.</p> <p>(2) Lessons learned and recommendations at the point seven years following project completion</p> <p>Lessons Learned: When similar projects are implemented in the future, it would be desirable to restudy the project plan at the point when it becomes clear that there is occurring a decline in economic viability and deterioration in management conditions</p>

Item	At the Time of Ex-Post Evaluation	At the Time of Ex-Post Monitoring
time of ex-post monitoring		<p>accompanying major changes in the project scope.</p> <p>Recommendation: It is desirable to conduct a fundamental review of the project and to restudy the project plan.</p>