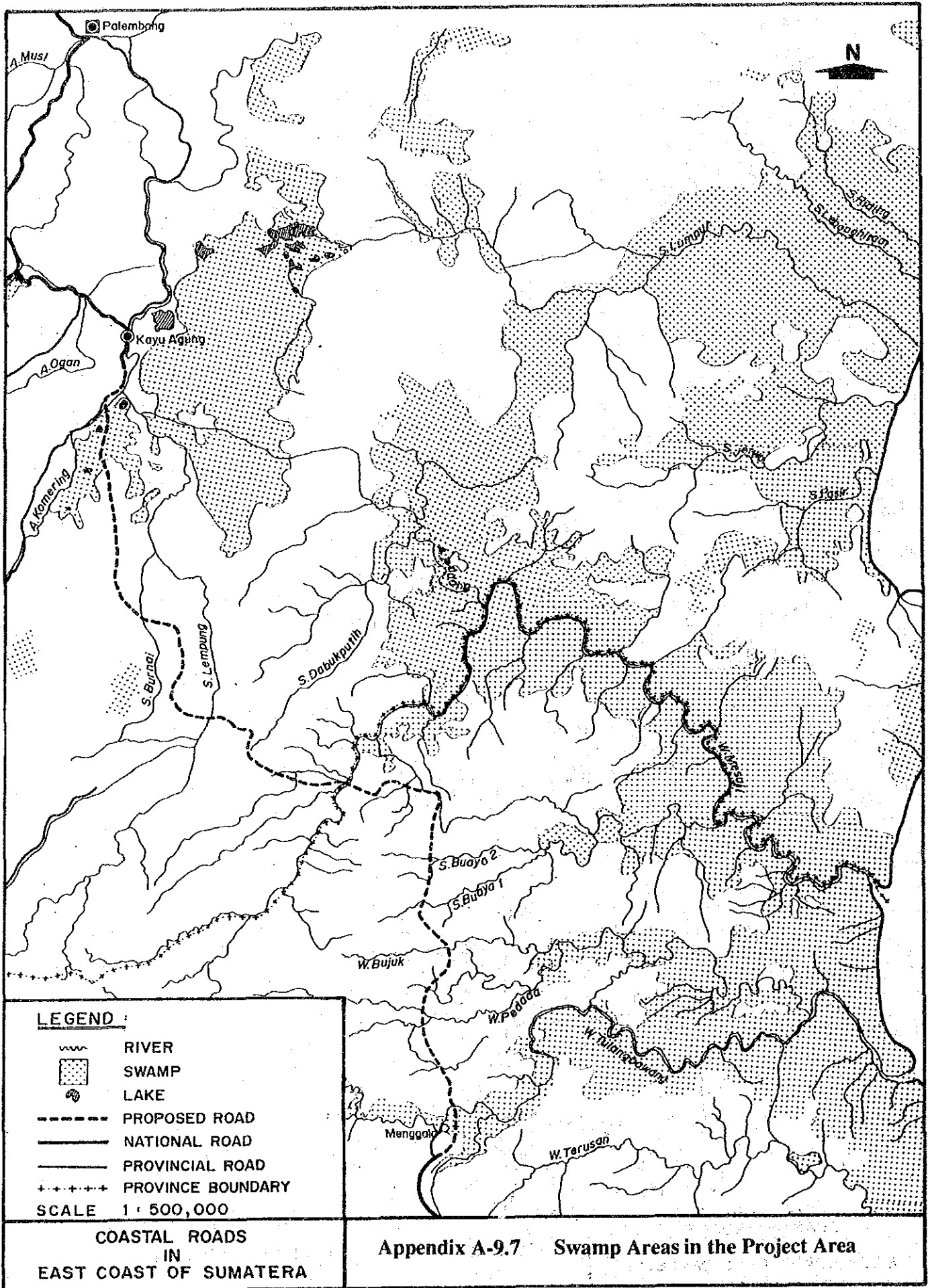


COASTAL ROADS  
IN  
EAST COAST OF SUMATERA

Appendix A-9.6 Settlement Location Map



## Appendix A-9.8 Economic Project Costs Flows

(Million Rp. at 1992 price)

Year	Construction Costs	Engineering Costs	Land Acquisition	Investment Costs Total	Maintenances (Routine, Periodical, Betterment, etc.)	Maintenance Costs for Without Cases
1994	16,347	4,715	7,441	28,504		
1995	32,693	1,572	7,442	41,707		
1996	32,693	1,572		34,265		
1997					150	101
1998					150	101
1999					150	101
2000					150	101
2001					12,794	8,569
2002					150	101
2003					150	101
2004					150	101
2005					150	101
2006					30,711	20,569
2007					150	101
2008					150	101
2009					150	101
2010					150	101
2011					12,794	8,569
2012					150	101
2013					150	101
2014					150	101
2015					150	101
2016					55,982	37,496
2017					150	101
2018					150	101
2019					150	101
2020					150	101
2021					150	101
Initial Costs Total	81,733	7,859	14,883	104,475		
Costs after Operation	0	0	0	0	115,430	77,323
Grand Total	81,733	7,859	14,883	104,475	115,430	77,323

- Note:
- 1) Construction costs include a countermeasure cost for elephants.
  - 2) Maintenance costs for Without include a routine maintenance cost, periodical maintenance cost, betterment cost, etc.

**Appendix A-9.9 Estimated Share Ratio of PCU-Kilometers by Vehicle Type and by Road Section**

Year 1997	Vehicle Type					Total
	Passenger Car	Light Truck	Heavy Truck	Small Bus	Large Bus	
Road Section						
(East Coast Highway)						
Section 1	17.4%	39.7%	21.4%	6.0%	15.5%	100.0%
Section 2	12.5%	49.5%	19.9%	5.5%	12.6%	100.0%
Section 3	9.6%	33.2%	32.2%	2.3%	22.7%	100.0%
Section 4	10.7%	32.5%	27.4%	5.5%	23.9%	100.0%
Section 5	13.0%	33.9%	20.3%	10.3%	22.5%	100.0%
Section 6	8.3%	35.5%	34.7%	1.9%	19.6%	100.0%
Section 7 (Existing Road)	15.1%	52.6%	12.5%	10.1%	9.7%	100.0%
Section 7 (7B and 7C)	4.7%	29.7%	49.6%	0.1%	15.9%	100.0%
(Rest of East Coast Highway)						
Local Road	14.1%	65.3%	1.5%	9.9%	9.2%	100.0%
Collector Road	15.1%	44.7%	8.5%	13.0%	18.7%	100.0%
Arterial Road	15.9%	46.9%	8.6%	12.9%	15.7%	100.0%

Year 2010	Vehicle Type					Total
	Passenger Car	Light Truck	Heavy Truck	Small Bus	Large Bus	
Road Section						
(East Coast Highway)						
Section 1	18.4%	37.8%	22.7%	6.9%	14.2%	100.0%
Section 2	11.8%	44.4%	23.3%	8.5%	12.0%	100.0%
Section 3	12.2%	34.7%	27.6%	3.2%	22.3%	100.0%
Section 4	13.1%	34.8%	21.7%	7.6%	22.8%	100.0%
Section 5	15.0%	30.6%	15.7%	14.4%	24.3%	100.0%
Section 6	10.0%	36.9%	30.3%	2.3%	20.5%	100.0%
Section 7 (Existing Road)	14.1%	48.2%	14.4%	13.1%	10.2%	100.0%
Section 7 (7B and 7C)	5.2%	29.7%	47.0%	0.2%	17.9%	100.0%
(Rest of East Coast Highway)						
Local Road	16.3%	60.1%	1.3%	10.4%	11.9%	100.0%
Collector Road	16.5%	41.5%	8.8%	16.6%	16.6%	100.0%
Arterial Road	16.4%	43.2%	9.9%	16.9%	13.6%	100.0%

(Note) : Based on the share ratio of PCU-kilometers by vehicle type estimated in the traffic assignment process.

## Appendix A-9.10 Estimation of Unit Vehicle Time Cost

(A) Per Capita GRDP at Current Price excluding Oil & Gas								(Rp.1,000)
Province	1983	1984	1985	1986	1987	1988	Average Annual Growth Ratio '83-'88	Estimated 1992
Aceh	423	465	523	567	635	701	10.63%	1,050
Sumatera Utara	368	446	475	520	634	736	14.87%	1,281
Sumatera Barat	346	398	439	494	577	656	13.65%	1,094
Riau	401	468	503	538	607	680	11.14%	1,038
Jambi	298	339	370	393	446	490	10.46%	729
Sumatera Selatan	484	528	576	621	705	773	9.82%	1,124
Bengklu	305	339	388	464	532	585	13.91%	985
Lampung	198	219	233	292	341	379	13.87%	637
Sumatra Average	353	400	438	486	560	625	12.11%	987

Source: Statistik Indonesia 1990

### (B) Assumption on Annual Working Hour

Monthly Working Hour	170 (Hours)
Annual Working Hour	2,040 (Hours)

### (C) Per Capita GRDP / Workinh Hour

484 (Rp./ hour)

### (D) Trip Purpose Composition in Sumatra Area

	(1) Car Passengers			(2) Bus Passengers		
	Purpose	Factor	Total	Purpose	Factor	Total
Business	27.0%	100.0%	131	9.5%	100.0%	46
Recreation	9.3%		0	8.3%		0
Visit Families	44.7%		0	50.4%		0
Work	12.4%	100.0%	60	11.4%	100.0%	55
School	1.6%		0	8.5%		0
Shopping	2.2%		0	2.8%		0
Others	2.8%		0	7.4%		0
Unknown	0.0%		0	1.7%		0
	100.0%		191	100.0%		101

Source: Data of Trip Purpose ...1991 National O/D Survey

### (E) Occupancy Rate of Vehicle in Sumatra Area

Car	3.0 (Persons)
Small Bus	7.1
Large Bus	34.8

Source: 1991 National O/D Survey

### (F) Estimation of Unit Vehicle Time Cost

Car	573 (Rp./ Hour)
Small Bus	717
Large Bus	3515





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