

**1.4.2 DEVELOPMENT GUIDELINE FOR
SURAT THANI CLUSTER**

1. POTENTIAL AND CONSTRAINTS

1.1 SURAT THANI

The most attractive place for international tourists is Ko Samui and its neighboring islands and marine environment, followed by cultural and historical attractions in Chaiya and Nakhon Si Thammarat. Although the majority of the tourists visiting this cluster is still domestic, but a considerable number of international tourists can be found in the recent years. The government has paid attention to Ko Samui for providing water supply, electricity, road, etc., and expected to develop Ko Samui as an international island resort to maintain its natural environment. It is notable that the most suitable period for tourism in this cluster is from February to October when the Phuket cluster is in off-season period for tourism.

Surat Thani is located on the west coast of the gulf of Thailand between latitude 8 17' - 9 50' and longitude 98 28' - 100 05', 650 kilometers south of Bangkok. The total area of the province is 12,890 sq. km.

The major landform is a coastal plain between the high plains on the west and the hilly areas and high plains on the east. The remainder of the province consists of 50 islands in the gulf of Thailand. The main islands are Ko Samui, Ko Pha-ngan and the Mu Ko Ang Thong National Park. These heterogeneous landforms have endowed Surat Thani Province with a beautiful natural environment i.e., forests, hills, waterfalls, coastal areas, and islands, all of which are attractive to tourists.

Following 3 categories of area has defined for the Study, i.e., mainland resorts, woodland areas and islands, have different physical conditions.

1) MAINLAND COASTAL RESORTS

Most of these are located around Ao Ban Don with the Chaiya district located to the north of Ao Ban Don. The physical condition of both areas is that of a plain of not more than 5 meters above sea level. Meanwhile, Don Sak district is located in the eastern part of the province at a slightly higher altitude than the other two areas. Mostly the land is used for agricultural purposes. Attractions here therefore, are associated mainly with arts and culture. There are only a few places of interest associated with the natural environment.

2) WOODLAND AREAS LOCATED IN THE WESTERN AND SOUTHERN PART THE PROVINCE

The areas consist mainly for forests, mountains and newly colonized agricultural areas. Attractions here are mostly associated with nature and are almost in perfect condition.

3) ISLAND RESORTS

These are islands located outside Ao Ban Don. Ko Samui is the largest island with a large number of places of interest, mostly beaches. Ko Samui is located about 80 kilometers from the Muang district. The area of the island is approximately 231.36 sq. km. The second largest island is Ko Pha-ngan, located 85.80 kilometers from the Muang district and about 15 km from Ko Samui. The area of Ko Pha-ngan is approximately 168 sq. km. In addition there is an archipelago located between Ko Samui and the mainland, which is called Mu Ko Ang Thong. The total area of these islands (including Phaluai island) is approximately 82.64 sq. km. Moreover, there is another island which is in a more remote location, 45 kilometers northwest of Ko Pha-ngan called Ko Tao. Its area is approximately 25 sq. km.

Surat Thani Province is not only blessed with heterogeneous natural resources, it is also blessed with a climate which is suitable for tourism. The dry season in Surat Thani lasts for 3 months, i.e., from February to April and is subjected to the northeast monsoon from November to April. It has heavy rains and strong waves between October and January. In other months the wind and the sea are both relatively calm. As a result, the tourist seasons in Surat Thani and Phuket are in alternate periods. The most suitable period for tourism in Surat Thani is from February to October when the sea is so calm and clear that one can easily view the abundant coral reefs from above water.

1.2 KO SAMUI

- 1) Size: 231.36 sq. km (Ko Pha-ngan: 168 sq. km)
- 2) Location: 80 km from Muang district (Ko Pha-ngan: 85.9 km from Muang district)
- 3) Population: Approximately 28,000
- 4) Land appearance: The geological condition of these islands is of granite mountain range which extends from the Nakhon Si Thammarat range. The major land uses are heterogeneous woodlands and coconut orchards. There are low plains, flood plains, beaches and coastal areas with a number of bays and capes suitable for tourism purposes.

2. MAJOR PLANS AND PROJECTS TO BE IMPLEMENTED

2.1 PLANS AND PROJECTS FOR SURAT THANI IN PHASE-I (1987-1991)

TABLE 1-43 PLANS AND PROJECTS TO BE IMPLEMENTED FOR SURAT THANI CLUSTER IN PHASE-I (1987-1991)-1

1. Ko Samui Water Supply Expansion, Phuket Province	PWA	PWA will take over the existing waterworks of the sanitary district. Water resource development is required to provide at least 300 m ³ /hr of raw water treatment plant, transmission and distribution comprising 260 m ³ /hr, treatment plant extension, transmission between substation and treatment plant and construction of distribution system to serve most of Samui island. Also construction of a new administration building at Na-Thorn sanitary district.	58.5*1)	-	-	19.5	19.5	19.5		Upper Southern Region Dev't	No-Rank 1988-'91
2. Ta-Thong Canal Project at A. Donsak, Surat Thani	RID	For water storage. 1987-91 construction period.	167.0*1)	-	31.2	41.9	60.6	25.1		Upper Southern Region Dev't	No-Rank 1988-'91
3. Ko Samui Water Supply System	PWA	Supply and distribution system. Part of National Tourism Development Project. OECF funding.	185.6*1)	-	46.4	46.4	46.4	46.4		Upper Southern Region Dev't	No-Rank 1988-'91
4. Phun Phin By-Pass Waterway	RID	JICA Study proposal. Designed to divert flood waters of Phun Duang River away from amphone Phun Phin. 2 km long 100 m wide plus a 100 m diversion dyke to guide flows to the Tapi River.	24.0*1)	-	-	8	8	8		Upper Southern Region Dev't	No-Rank 1989-'91
5. Tapi Plain Drainage Project	RID	Drainage channels and ditches to shorten flood duration and increase agricultural productivity. JICA proposal.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
6. Thevada Canal Project (Tan Canal) at A. Wiang Sa, Surat Thani	RID	Irrigation project.	55.6*1)	-	-	11.1	27.8	16.7		Upper Southern Region Dev't	No-Rank 1989-'96
7. Tapi-Phum Duang Irrigation Development Phase I	RID	JICA Study proposal. Utilising Chiew Lam Dam, 6 areas on left bank of the Phum Duang and Phun Phin Rivers extending down into the delta area. Net irrigated area would be 14,700 hectares	454*1)	-	-	65	65	65		Upper Southern Region Dev't	No-Rank 1989-'96
8. Tapi-Phum Duang Irrigation Development Phase II	RID	18 areas totalling 40,320 hectares	1,128*1)	-	-	-	-	80		Upper Southern Region Dev't	No-Rank 1991-'00
9. Tapi River Basin Irrigation Development	RID	JICA Study proposal. 1973 RID Study identified several locations for further study. Dam storage capacity 30-150 million cubic meters. Cost of each project 100-500 million bath.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
10. Route 401, Phun Phin-Surat Thani	DOH	To upgrade to S1 standard. Under construction by Surat Thani Construction Center of DOH. 12 km length.	139.2*1)	-	37.1	42.0	-	-		Upper Southern Region Dev't	No-Rank 1988-'89
11. Route 4143, Rout 4009-Krud, Surat Thani	DOH	Construction of paved road to F4 standard. Under construction by Surat Thani construction center of DOH. 29.7 km length.	46.3*1)	-	13.9	11.0	-	-		Upper Southern Region Dev't	No-Rank 1988-'89
12. Route 4040, Phanom-Khao To, Surat Thani	DOH	Construction of paved road to F2 standard section by section. Aims to encourage tourism. 14.8 km length.	13.9*1)	-	9.3	4.6	-	-		Upper Southern Region Dev't	No-Rank 1988-'89
13. Route 41, Nam Kliang-Khian Sa, Surat Thani	DOH	Construction of paved road to F4 standard 14.0 km length.	29.7*1)	-	-	13.9	15.8	-		Upper Southern Region Dev't	No-Rank 1989-'90
14. Route 4133, Khian Sa-Phra Saeng, Surat Thani	DOH	Construction of paved road to F4 standard 32.5 km length.	48.3*1)	-	-	-	-	18.6		Upper Southern Region Dev't	No-Rank 1991-'96
15. Route 4009, Ban Song-Phra Saeng, Surat Thani	DOH	Rehabilitation of existing highway to F4 standard. 16.9 km length.	31.6*1)	-	-	9.3	22.3	-		Upper Southern Region Dev't	No-Rank 1989-'90
16. Wat Sawang Aron to Ao Chaweng Road, Surat Thani	Province	2.5 km length, F4 standard. Part of National Tourism Development Project, OECF funding.	5.2*1)	-	1.3	1.3	1.3	1.3		Upper Southern Region Dev't	No-Rank 1988-'91
17. Plai Laem, Choenomon and Chaweng Roads, Surat Thani	Province	7.0 km length, F4 standard. Part of National Tourism Development Project, OECF funding.	14.0*1)	-	3.5	3.5	3.5	3.5		Upper Southern Region Dev't	No-Rank 1988-'91
18. Provincial Highway No. 4040, Surat Thani	DOH	48 km length, F4 standard. Part of National Tourism Development Project, OECF funding.	97.6*1)	-	24.4	24.4	24.4	24.4		Upper Southern Region Dev't	Up to 1988
19. Route 4169, Ko Samui	DOH	Rehabilitation of existing highway to F4 standard to encourage tourism development 80.3 km length.	20.4*1)	-	20.4	-	-	-		Upper Southern Region Dev't	No-Rank 1988-'96
20. East-West Road Link	DOH	JICA Study proposal. 2 lane road to primary national highway standard. 88.3 km of new construction 135.7 km of upgrading exiting roads. Phuket new bridge. New construction is Surat Thani-Route 41 (17.9k m), Route 41-Phanom (46.9km), Thao Put-Phananga By-Pass (8.3km). Improvement works involve strengthening the pavement, widening the carriageway and some improvement of vertical and horizontal alignment. Phuket New Bridge is 15.2 km including accessroads. Traffic volume in 2000 estimated at 6000 PCU's per day.	1,382*1)	-	-	264	263	263		Upper Southern Region Dev't	No-Rank 1989-'96

21. East-West Road Link (without new rail link)	DOH	JICA Study proposal. 4 lane road over same alignment as the 2 lane road.	3,007*1)	-	-	445	445	446		Upper Southern Region Dev't	No-Rank 1988-'96
22. Further Improvements to the Krabi -Su Thani Road	DOH	Ongoing upgrading of this route after improvements implemented under DOH's current program.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
23. Khanom Deep Sea Port Phase I	HD	JICA Study proposal. 4 berths for ocean going vessels, one for coastal shipping. Water channel of 2.4 km length, 120 m width and 10 m depth, Turning basin of 360 m. Phase I is one berth for ocean going vessel and the coastal shipping berth.	427*1)	-	-	-	-	210		Upper Southern Region Dev't	No-Rank 1997-'00
24. Khanom Deep Sea Port Phase II		Phase II provided one and 2 ocean going berths respectively.	201*1)	-	-	-	-	-		Upper Southern Region Dev't	No-Rank 1992-'96
25. Khanom Deep Sea Port Phase III		Phase III provided one and 2 ocean going berths respectively.	393*1)	-	-	-	-	-		Upper Southern Region Dev't	No-Rank 1997-'00
26. Surat Thani Fishing Port	HD	JICA Study proposal. fishing port to be built alongside recently constructed The Thong Port. 150 m wharf with 16 hectares of supporting industrial area.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
27. East-West Rail Link		JICA Study proposal. Extension of the existing Khiri Rattanakom spur line-201 km of new construction 31 km of improvement to existing line. Mostly parallel to the road line. Terminate at Phuket Deep Sea Port. Traffic volume in year 2000 estimated at nine freight trains and 3 passenger trains per day. Possible prefeasibility study funded by Canadian Aid in 1988.	2,733*1)	-	-	-	309	340		Upper Southern Region Dev't	No-Rank 1990-'00
28. Surat Thani Airport	DOA	Strengthening of the runway and improvements to the runway lighting system to allow it to accept DC/8/62 military aircraft. Radar is also to be installed to assist ATC.	102.1*1)	-	34.7	67.4	-	-		Upper Southern Region Dev't	No-Rank 1988-'89
29. Ko Samui Airport Improvement	DOA	Improvement of the airport to allow regular, larger capacity flights to Bangkok.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
30. Ko Samui Telephone systems	TOT	Telephone expansion, part of National Tourism Development Project. OECF funding.	11.2*1)	-	2.8	2.8	2.8	2.8		Upper Southern Region Dev't	No-Rank 1988-'91
31. Central Lowland Development	MOA	JICA Study proposal. Focus is on oil palm production in both large scale estates and small holder development. Assistance with land assembly, tenure, finance, technical advice. 7 potential sites identified at Kiansa, Plai Praya, Pra Saeng, Ao Luk, Khao Phanom, Khlong Tom.	2,542*1)	-	-	291	291	290		Upper Southern Region Dev't	No-Rank 1989-'00
32. Kaena Krung Power Project, Surat Thani	EGAT	JICA Study proposal. Hydropower from the Kaen Krung Dam. Production would be 2x34 MW and Gwh.	1,956*1)	-	-	594	593	593		Upper Southern Region Dev't	No-Rank 1989-'96
33. Surat Thani Industrial Estate	IEAT	JICA Study proposal. 18 km from Surat Thani, close to airport and Route 41. 190 hectares gross. Forecasts are: 9900 jobs, 8,600 million baht annual gross output, 26,500 m3 water consumption per day, 11,700 m3 waste water per day and annual electricity demand of 82.9 million kwh. Industrial estate for medium and large scale operations. Resource based and export industries.	331*1)	-	-	97	97	96		Upper Southern Region Dev't	No-Rank 1989-'96
34. Development of Bo-Phut and Chaweng Beaches, Ko Samui		JICA Study proposal. Provision of public utilities, parks and amusement facilities.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
35. General Environmental Improvement		JICA Study proposal. Whole island.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
36. Chaiya Historic Park Development		JICA Study proposal. Centering on Wat Suan Mokapalaram and Phra Barom Dhat. One of the Urban Development sub projects.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
37. Wiang Sa Ancient City		JICA Study proposal. Ongoing research and excavation.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
38. Phium Rieng Traditional Industry Center		JICA Study proposal. As both a tourist attraction and a vocational center	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
39. Forest Park Improvement			-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
40. Visitors Center		JICA Study proposal. Restaurants, exhibition and seminar rooms.	-	-	-	-	-	-		Upper Southern Region Dev't	No-Rank
41. Similan Archipelago Marine National Park	FD	Small pair and tourist services. Part of National Tourism Development Project, OECF funding.	1.2*1)	-	-	1.2	-	-		Upper Southern Region Dev't	Up to 1989

42. Surin Archipelago Marine National Park	FD	Small pair and tourist services. Part of National Tourism Development Project, OECF funding.	1.2*1)	--	--	1.2	--	--		Upper Southern Region Dev't	Up to 1989
43. Other Projects	TAT	Difference between budgeted amount and detailed list of projects included in the National Tourism Development Project, (OECF funding). Assume this is for large number of small projects.	256.8*1)	--	64.2	64.2	64.2	64.2		Upper Southern Region Dev't	No-Rank 1988-'91
44. Industrial Promotion Zoon between Phun Phin and Surat Thani Phase 1	INFRA AGENCIES/ BOI/MOI	JICA Study proposal. Development of urban and industrial utilities. Area given top priority for infrastructure, tax incentives linked to BOI privileges, and restriction of land use to industry.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
45. Industrial Promotion Zoon between Phun Phin and Surat Thani Phase 2		JICA Study proposal. Provision of industrial infrastructure services along Route 401.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
46. Industrial Promotion Zoon between Phun Phin and Surat Thani Phase 3		Continuing development.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
47. Tha Thong Port Development Phase 1	HD	JICA Study proposal. 100 hectares for fishery related facilities and processing activities.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
48. Tha Thong Port Development Phase 2		further development	604*1)	--	--	85	85	85			No-Rank 1989-'00
49. Distribution Business Center Development Phase 1	Priv. Sector	JICA Study proposal. 40 hectares to the South of the Phun Phin Industrial Estate. Includes truck terminal.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
50. Distribution Business Center Development Phase 2		60 hectares extension to Phase 1 Warehousing and wholesaling complex.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
51. Distribution Business Center Development Phase 3		Ongoing development	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
52. Technical Training Center	MOE	JICA Study proposal. Vocational training for lower secondary school graduates and over industrial and business training, research and development.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
53. Central Area Redevelopment	IG/Priv. Sector	JICA Study proposal. Intensification of Central Area commercial development	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
54. Sub-Center Development	IG/Priv. Sector	JICA Study proposal. Along Route 401	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
55. Drainage System Development	Mun.	JICA Study proposal. Open canal of 18 km with one pumping Station.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
56. Urban Infrastructure and Utilities Development Phase 2	Mun.	JICA Study proposal. Following on from 1.1.4 and 6.1.7. Includes water supply, drainage, solid waste and waste water treatment systems.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
57. Urban Infrastructure and Utilities Development Phase 3		Ongoing program.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
58. Telecommunication Development Program	TOT	JICA Study proposal. Main system and distribution lines to cater for demand up to 2000.	442*1)	--	--	57	56	56		Upper Southern Region Dev't	No-Rank 1989-'00
59. Secondary Roads Phase 1	Mun.	JICA Study proposal. New construction 14 km improvement 29 km.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
60. Secondary Roads Phase 2		ongoing program.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
61. Phase 3 secondary and tertiary Roads		ongoing program.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
62. Primary Roads	DOH	JICA Study proposal. Surat Thani/Phun Phin by-pass. Route 401 past of East-West link.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
63. Housing and Residential Area Development Phase 1	MHA	JICA Study proposal. Provision of physical and social infrastructure for 45,000-50,000 people plus 2,400 housing units.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
64. Housing and Residential Area Development Phase 2		JICA Study proposal. Ditto for 75,000-9,000 plus 3,500 dwelling units.	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
65. Housing and Residential Area Development Phase 3		JICA Study proposal. To cater for growth but to include a 'new town' at Phun Phin.	2,282*1)	--	--	319	318	318		Upper Southern Region Dev't	No-Rank 1989-'00
66. Slum Upgrading Phase 1	Mun.	JICA Study proposal. 2000 families	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank
67. Slum Upgrading Phase 2		JICA Study proposal. 3500 families	--	--	--	--	--	--		Upper Southern Region Dev't	No-Rank

68. Surat Thani Housing Project	NHA	300 unit for sale, 60 for rent. Project is 15% complete and due for completion in mid 1988. ADB funding 29.5 million bath.	51.6*1)	-	18.6	-	-	-	-	Upper Southern Region Dev't	Up to 1988
69. Ban Don Port River Frontage Development	Mun.	JICA Study proposal. Community port facilities and riverside park development.	-	-	-	-	-	-	-	Upper Southern Region Dev't	No-Rank
70. Recreational Zone Improvement	Mun.	JICA Study proposal. Park development, sports facilities.	57*1)	-	-	13	13	12	-	Upper Southern Region Dev't	No-Rank 1989-'00
71. Chaiya Historic Park Development	Prove.	JICA Study proposal. 2 areas-one at Wat Suan Mukapalaran (10 hectares) and the other at Phra Barom Dhat.	-	-	-	-	-	-	-	Upper Southern Region Dev't	No-Rank
72. Urban Beautification Program	Mun.	JICA Study proposal. Greening, sewerage and solid waste treatment.	-	-	-	-	-	-	-	Upper Southern Region Dev't	No-Rank
73. Inter-Regional Bus Terminal	Priv. Sector	JICA Study proposal. Includes local market.	-	-	-	-	-	-	-	Upper Southern Region Dev't	No-Rank
74. Railway Station Plaza Development	SRT	JICA Study proposal. New line between Phun Phin and the proposed Khanom deep sea port. Includes 4 to 5 stations.	15*1)	-	-	10	5	-	-	Upper Southern Region Dev't	No-Rank 1989-'90

TABLE 1-44 PLANS AND PROJECTS TO BE IMPLEMENTED FOR SURAT THANI CLUSTER IN PHASE-I (1987-1991)-2

TYPE OF PROJECTS	AGENCIES RESPONSIBLE	BRIEF DESCRIPTIONS	BUDGET (mil. baht)	FISCAL YEARS (mil. baht)					REMARKS	SOURCE OF FUND (mil. baht)	IMPLEMENTATION PERIOD	
				1987	1988	1989	1990	1991				
S A M U I I S L A N D I N F R A S T R U C T U R E	1. Ao plai Laem-Ao Choengmon-Ao Chaweng Road, Ko Samui, Surat Thani	Surat Thani Province	F4 Standard 7.0 km long	15.12	5.00	10.12	-	-	-	OECF (15.12)	1989-'	
	2. Wat Sawang Arom-Ao Chaweng Road Ko Samui, Surat Thani Province	Surat Thani Province	F4 Standard 2.5 km long	5.40	-	-	5.40	-	-	OECF (5.40)	1989-'	
	3. Bang Chon-Khram-Wat Nara Charoen Suk-Ban Na Sai Road, Ko Samui	D.O.H. Samui S.D.	Standard 2.5 km long	5.36*1)							M/P Phase-I	
	4. Highway No.4170-Ban Thong Ta Not Ko Samui, Surat Thani Province	Samui S.D.	Standard 1.0 km long	2.14*1)							M/P Phase-I	
	5. Access Road to Na Muang Waterfall Ko Samui, Surat Thani Province	Samui S.D.	Standard 1.0 km long	2.14*1)							M/P Phase-I	
	6. Access Road to Wat Na Phra Lan Ko Samui, Surat Thani Province	Samui S.D.	Standard 0.75 km long	1.61*1)							M/P Phase-I	
	7. Telephone System Ko Samui, Surat Thani Province	T.O.T.	Telephone Expansion from 600 to 1000nos.	12.00	-	12.00	-	-	-	OECF (12.00)	1989-'	
	8. Water Supply System Ko Samui, Surat Thani Province	P.W.W.A.	Develop Raw Water Resources	477.00	-	477.00	-	-	-	OECF (44.10) OTHER SOURCES	1989-'	
	9. Water Supply to the Beaches Ko Samui, Surat Thani Province	P.W.A.	Provision of Good Quality Water								M/P Phase-I	
	10. Telephone System Ko Samui, Surat Thani Province	T.O.T.	Telephone Expansion from 600 to 1000nos.	12.00	-	12.00	-	-	-	OECF (12.00)	1989-'	
	11. Electricity Supply System Ko Samui, Surat Thani Province	P.E.A.	Extension of Under-water Cable	200.00						Under-construction	G/B Foreign Aid	1986-'87
	12. Expansion of Electricity Supply Ko Samui, Surat Thani Province	P.E.A.	Service to the Whole Area of Ko Samui								M/P Phase-I	
	13. Telecommunication System Ko Samui, Surat Thani Province	M.C.O.T./ R.F.D.	Installat'n of Radio Comm. System							G/B Foreign Aid	M/P Phase-I	
P H A N G A N	1. Electricity Supply System Ko Phangan, Surat Thani Province	P.E.A.	Increase in Capacity of Generation/Supply								M/P Phase-I	
	2. Development of Water Resources Ko Phangan, Surat Thani Province	R.I.D.	Nam Tok Phang Wier, Sa Monora Wier, etc.								M/P Phase-I	
	3.										M/P Phase-I	
AN GT	1. Water Supply System Mu Ko Ang Thong, Surat T. Prov.	R.I.D.									M/P Phase-I	
C H A I Y A	1. Road Between Wat Wiang to Thung Sai Ngam, Chaiya, Surat T. Prov.	P.A.O.	Standard 5.0 km long	10.72*1)							M/P Phase-I	
	2. Road Between Talat Phumriang to Sua Mok Khao, Phumriang, Surat P.	Phumriang S.D.	Standard 0.5 km long	1.10*1)							M/P Phase-I	
	3. Road: Phumriang to Ban Chai Thale Laem Sui, Chaiya, Surat Thani P.	P.A.O.	Standard 11.5 km long	24.65*1)							M/P Phase-I	
	4. Road: Ban Thong Sala-Ban Chlok Lum Chaiya, Surat Thani Province	P.A.O.	Standard 10.0 km long	21.44*1)							M/P Phase-I	
	5. Road: Ban Thong Sala-Ban Hin Kong Ban Mae Hat-Ban Chalok Lum	P.A.O.	Standard 15.0 km long	2.53*1)							M/P Phase-I	
	6. Road: Ban Thong Sala-Ban Thai Chaiya, Surat Thani Province	P.A.O.	Standard 5.0 km long	10.72*1)							M/P Phase-I	

	7. Road: Ao Wok Tum-Ban Hin Kong Chaiya, Surat Thani Province	P.A.O.	Standard 5.0 km long	0.84*1)															M/P Phase-I	
	8. Road: Ban Thai-Hat Rin Chaiya, Surat Thani Province	P.A.O.	Standard 5.0 km long	0.84*1)															M/P Phase-I	
	9. Road: Ban Thai-Ban Thung Ta Pan-Ao Hat Khuad-Ban Chalok Lai	P.A.O.	Standard 30.0 km long	5.07*1)															M/P Phase-I	
	10. Road: Access to Thung Sai Ngam Chaiya, Surat Thani Province	P.A.O.																	M/P Phase-I	
	11. Electricity Supply System Chaiya, Surat Thani Province	P.E.A.	Expansion to the major tourist areas																M/P Phase-I	
	12. Expansion of Water Supply System Chaiya, Surat Thani Province	P.W.A./Phumriang S.D.	Improv't of Service to Talat Chaiya																M/P Phase-I	
	13. Water Supply Plant in Phumriang S.D., Surat Thani Province	P.W.A./Phumriang S.D.	Construction of Water Supply Plant																M/P Phase-I	
	14. Water Supply Plant in Phumriang S.D., Surat Thani Province	P.W.A./Phumriang S.D.	Construction of Water Supply Plant																M/P Phase-I	
OTHER	1. Access Road to Wat Wiang Sa	P.A.O./O.A.R.D.																	M/P Phase-I	
	2. Access Road to Wat Tham Sing Khon	P.A.O./O.A.R.D.																	M/P Phase-I	
	3. Access Road to Ban Thung Thong Forest Park	P.A.O./O.A.R.D.																	M/P Phase-I	
	4. Access Road to Sa Ban Saweng	P.A.O./O.A.R.D.																	M/P Phase-I	
	5. Access Road to Kaeng Ton	P.A.O./O.A.R.D.																	M/P Phase-I	
	6. Access Road to Tham Homn	P.A.O./O.A.R.D.																	M/P Phase-I	
CHUMPHON	1. Road: Chumphon to Ao Thung Wua Lan KRABI	Chumphon Province	F4 Standard 10.0 km long	21.60	—	—	—	10.00	11.60										OECF (21.60) 1988-'	
	5. Provincial Highway No. 3180 Chumphon Province	D.O.H.	F4 Standard 15.0 km long	32.40	—	—	—	16.00	16.40										OECF (16.40) 1990-'	
NANTHABUR	1. Kra Rom Waterfall Turnoff Road Nakon Si Thammarat Province	R.F.D.	F4 Standard 3.0 km long	6.84	—	—	—	6.84	—	TAT + RFD									OECF (6.84) 1990-'	
	2. Provincial Highway No. 3180 Ao Luk, Krabi Province	D.O.H.	F4 Standard 48.0 km long	105.00	—	—	30.00	30.00	45.00										OECF (105.00) 1989-'	
MURANG SURAT	1. Road: Bung Khun Tale Muang, Surat Thani Province	P.A.O.	Standard 3.0 km long	5.09*1)															M/P Phase-I	
	2. Road: Kao Ban Khwai-Bo Krang Muang, Surat Thani Province	O.A.R.D./P.A.O.	Standard 1.0 km long	1.70*1)															M/P Phase-I	
	3. Access Road to Phutthamongkhon Muang, Surat Thani Province	P.A.O.	Standard 2.0 km long	3.39*1)															M/P Phase-I	
	4. Improvement of Road Network: Surat Thani-Phunphin	D.O.H.	Standard 12.0 km long																	Under-construction*1)
	5. Improvement of Highway No. 4133 Surat Thani Province	D.O.H.	Standard km long																	M/P Phase-I
	6. Improvement of Road: Khiri Rattani Khom-Tha Chang and Chaiya	P.A.O.	Standard km long																	M/P Phase-I
	7. Expansion and Improvement of Ban Don Pier, Muang, Surat Thani P.	Municipality Private	20 m x 100 m long																	M/P Phase-I
PUBLIC FACILITIES / ORGANIZATION	1. Provision of Bus Station and Parking Area in Ko Samui	T.L.C./Ko Samui SD																	M/P Phase-I	
	2. Development of a Small Airport in Ko Samui, Surat Thani Province	Private																	Under-construction M/P Phase-I	
	3. Establishment of Occupational Training and Trade Centers	T.A.T.	Trade Center for Local Products	0.03*1) each year																M/P Long-run
	4. Provision of Training in Dramatic Performance in Ko Samui	Ministry of Industry	For Both Teachers and Students	0.015*1) each year																M/P Long-run
	5. Formulation and Promotion of Arts and Culture Groups	Samui SD		0.01*1) each year																M/P Long-run
	6. Establishment of Tourist Information Center	T.A.T.																		M/P Long-run
	7. Na Muang Waterfall Ko Samui, Surat Thani Province	R.F.D. Samui SD	Parking Area, Tourist Service and Water																	M/P Phase-I
	8. Hin Lat Waterfall Ko Samui, Surat Thani Province	R.F.D. Samui SD	Parking Area, Tourist Service and Water																	M/P Phase-I
	9. Laem Sui Surat Thani Province	P.A.O./Private	Roads, Pier, Service and Bungalows																	M/P Phase-I
	10. Establishment of Ko Taen National Park, Samui, Surat Thani Prov.	R.F.D./SD T.A.T.	Proclamation of Area Office, Service																	M/P Phase-I
	11. Establishment of Ko Tao/Ko Nang Yuan National Park, Phangan	R.F.D./SD T.A.T.	Proclamation of Area Office, Service																	M/P Phase-I

P H A N G	1. Establishment of Ko Phangan Sanitary District	D.T.C.P./ O.D.I.																M/P Long-run	
	2. Tourist Information Center at Ko Phangan, Surat Thani Prov.	T.A.T.																M/P Phase-I	
	3. Organization of Bus and Boat Services to Ko Phangan	Phngan SD D.P.W.																M/P Phase-I	
C H A I Y A / P H U M R I A	1. Establis't of Occupational Training/Trade Centers at Phumriang	T.A.T.	Centers for Local Products	0.03*1) each year														M/P Long-run	
	2. Provision of Training in Dramatic Performance in Ko Samui	Ministry of Industry	For Both Teachers and Students	0.015*1) each year														M/P Long-run	
	3. Formulation and Promotion of Arts and Culture Groups	Samui SD		0.01*1) each year														M/P Long-run	
	4. Establishment of Tourist Information Center	T.A.T.																M/P Phase-I	
	5. Thung Sai Ngam	T.A.T.	Walk ways and Tourist Service															M/P Phase-I	
M U A N G / S U R A T / T H A N I / O V E R A L L	1. Bang Khun Thale Recreational Area Muang, Surat Thani Province	P.A.O./ T.A.T.	Roads, Parking Areas Sports Club, etc.															M/P Phase-I	
	2. Construction of a New Bus Station in Muang, Surat Thani Province	T.C.L./P.T./ Private																M/P Phase-I	
	3. Expansion and Improvement of Bus Service	T.C.L./ D.L.T.																M/P Phase-I	
	4. A Terminus for All Vehicles for Hire at Talat Kaset "1" and "2"	P.T./ Private																M/P Phase-I	
	5. Expansion and Improvement of Railway Service	S.R.T.																M/P Phase-I	
	6. An Increase in Seat and Flights to Surat Thani	Thai Airways																M/P Phase-I	
	7. Establishment of A Center for Tourism Development of Surat Than	D.P.R./ Private	For Tourism Promotion and Services	0.53*1) each year														M/P Long-run	
	8. Improvement and Expansion of Water Supply in Muang Surat Thani	P.W.A.																M/P Long-run	
	9. Security and Safety Measures to Surat Thani Province	Police Dept. Municip./SD	Increase Staff, Equipments etc.	1.28*1) for 5years															M/P Long-run
	10. Establishment of Surat Thani Province Tourism Dev't Committee	L.G./T.A.T./ Municipality	Alternative 1 or 2	0.32*1) each year															M/P Long-run
	11. Proclamation of the Areas Subject to Building Construct'n Control	L.G./T.A.T./ Municipality	Samui, Talat Chaiya, Phumriang, Don Sak	0.85*1) each year															M/P Long-run
T O U R I S M / S T	1. Expansion of Surat Thani Airport into an International Airport	D.O.A./ A.P.A.T.																M/P Long-run	
	2. Formulation of Physical Plans and Environmental Regulations	DTCP/TAT/SD/ DPW/LG/MOI/	Samui, Talat Chaiya, Phumriang, Don Sak	3.25*1) for 5year														M/P Phase-I	
	3. Proclamation of the Areas Subject to Building Construct'n Control	L.G./T.A.T./ Municipality	Samui, Talat Chaiya, Phumriang, Don Sak	0.85*1) each year														M/P Long-run	
	4. Study of the Following Roads: a) Bypass to Phunphin b) Khirattani-Kham-Khian Sa c) Phanom-Road No. 4009	D.O.H./ P.A.O.																	M/P Phase-I
	5. Community Plans for Ko Samui: a) Talat Na Thon b) Secondary Urban Centers: -Ban Mae Nam -Ban Bo Phut -Ban Hua Tha Non	DTCP/ Ko Samui SD	Landuse, infrastructure, public park, piers, local craft, historical buildings etc.,																M/P Long-run
	6. Development Plans for Nature Oriented Development Beaches ie., Hat Mae Nam, Bo Phut, Bang Rak, Thong Yang, Hat Chaweng Mon in Ko Samui & Hat Rin, Hat Wok Tum, Hat Thong Sala/Nai Hok in Ko Phangan	T.A.T.	Landuse and measures to control of building construction and protection of environment	0.85*1) each year															M/P Long-run
	7. Community Plans for Chaiya: a) Talat Chaiya b) Phumriang	DTCP/ Talat Chaiya Phumriang SD	Landuse, infrastructure, bus terminal, local craft, history,																M/P Long-run
	8. Formulation of Master Plan for Muang Surat Thani	DTCP/PWA Municipality	Landuse, infrastructure, housing, park,																M/P Long-run
R E L A T E D / R E G I O N A L	1. East-West Link Road	DOH		1.382.0*2)														Upper Southern Region Dev't	Rank-2
	2. Surat Thani/Phunphin Industrial Promotion Zone	Local Govern ment																Upper Southern Region Dev't	Rank-4 1990
	3. Surat Thani Industrial Estate	IEAT/ Private		331.0*2)														Upper Southern Region Dev't	Rank-5 1990-'95
	4. Surat Thani Water Supply II	PWA		112.5*2)									Foreign Aid				Upper Southern Region Dev't	Rank-6 1992-'94	
	5. DOH Road Programs	DOH		315.5*2)														Upper Southern Region Dev't	Rank-6 1987-'91
	6. Tha Thong Port Development	HD/Local Gov./Private		n.a.														Upper Southern Region Dev't	Rank-10 1992-'96

DEVELOPMENT

7. Ko Samui Water Supply System	RID/PWA/Private		185.6*2)						Upper Southern Region Dev't	Rank-11 1990-'91
8. Ko Samui Water Supply	RID/PWA/		58.5*2)						Upper Southern Region Dev't	Rank-14 1990-'91
9. Surat Thani Slum Upgrading	Local Government		n.a.						Upper Southern Region Dev't	Rank-19 1990-'94
10. Telecommunication Development	TOT		n.a.						Upper Southern Region Dev't	Rank-28 1990-'93
11. Primary Roads	DOH		n.a.						Upper Southern Region Dev't	Rank-29 1991-'92
12. Central Lowlands Agricultural Development	MOAC		n.a.					Foreign Aid	Upper Southern Region Dev't	Rank-1988-'89

2.2 PLANS AND PROJECTS FOR SURAT THANI IN PHASE-II (1992-1996)

TABLE 1-45 PLANS AND PROJECTS TO BE IMPLEMENTED FOR SURAT THANI CLUSTER IN PHASE-II (1992-1996)

TYPE OF PLANS/PROJECTS		AGENCIES RESPONSIBLE	ROUGH COST (mil.baht)	PHASING PRIORITY	PROPOSED BY
K O S A M U I & P H A N G A N	1. Improvement of Air Operation b/w Hat Yai and Surat Thani	DOH	n.a.	Phase-II	Study Team
	2. Promotion of Air Transportation Network b/w Phuket and Samui		n.a.	Phase-II	Study Team
	3. Access Road to Laem So, Chaweng Beach*1", Road Connecting Ban Plai Laem-Hat Choeng Mon-Hat Chaweng and Ban Na Sai-Ban Chai Thale in Ko Samui	SD/DOH	22.61	Phase-II	M/P
	4. Improve the Road Network of Ko Phangan	PEA	n.a.	Phase-II	M/P
	5. Expand the Existing Pier of Sanitary District of Ko Samui	PEA	n.a.	Phase-II	M/P
	6. Improvement of the Existing Pier at Ko Phangan	DPW/SD	n.a.	Phase-II	M/P
	7. Develop the Water Supply Network to the Beaches in Ko Samui	SD	n.a.	Phase-II	M/P
	8. Develop Water Reservoir and Supply System in Phangan Island	n.a.	n.a.	Phase-II	M/P
	9. Expand the Electricity Line to the Beaches in Ko Samui	PEA	n.a.	Phase-II	M/P
	10. Develop Electricity Generator in Ko Phangan	n.a.	n.a.	Phase-II	M/P
	11. Establish the Telecommunication Center in Ko Samui	MCOT/TAT	n.a.	Phase-II	M/P
S U R A T T H A N I	12. Access Road to Laem Pho, Wat Cham Pa in Chaiya and Road between Ban Chai to Laem	PAO/SD	11.79	Phase-II	M/P
	13. Road between Khao Sok National Park Office to Bang Liab Nam, Road No. 401 to Tham Siru, No. 401 to Thung Khai Han and No. 401 to Thung Khai Han	RFD	6.56	Phase-II	M/P
	14. Access Road to Wat Tham Khula, to Wat Khao Si Wichai and Road between Bung Khun Tale to Highway	PAO	15.24	Phase-II	M/P
	15. Construct a Piers at Laem Pho and Laem Sui	SD	n.a.	Phase-II	M/P
	1. Construct Bus Station in Don Sak Ferry Port	TCL/Private	n.a.	Phase-II	M/P
	2. Construct Truck Terminal for Goods Transfer at Don Sak Ferry Port	n.a.	n.a.	Phase-II	M/P
	3. Establish a Medium-sized Arts and Craft Center in Ko Samui	MOE	n.a.	Phase-II	M/P
	4. Establish a Tourist Community Center facilitating Library, Tourist Information Center, Handicraft Center, Meditation School, etc.	SD/TAT	n.a.	Phase-II	Study Team

P U B L I C S U R A T F A C I L I T I E T H A N I	5. Provision of Hydrofoil Speed Boats between Surat Thani/Don Sak to Samui, Phangan and Ang Thong Islands	Private/MP/LG	n.a.	Phase-II	ST	
	6. Provision of Helicopter Sight-seeing Tour From Samui Airport	Private	n.a.	Phase-II	ST	
	7. Establish a Tourism Service Facilities at Laem Pho	TAT	n.a.	Phase-II	M/P	
	8. Establish Laem Pho Historical Museum	FAD	n.a.	Phase-II	M/P	
	9. Develop Laem Pho Community	n.a.	n.a.	Phase-II	M/P	
	10. Construct Bus Station in Phanom District	TCL/Private/PT	n.a.	Phase-II	M/P	
	S T U D Y	1. Review and Updating and Undertaking the Feasibility Study of the Master Plan for Ko Samui/Surat Thani Tourism Development Plan with the close Coordination of the Coastal Management Projects Conducted by NEB and CIPO Especially for Urban Development of Surat Thani City	TAT	n.a.	Phase-II	Study Team
		2. Formulation of the Community Plan for Ban Thong Sala in Phangan Island	n.a.	n.a.	Phase-II	M/P
		3. Preparation of Management Plan for Ang Thon Islands National Marine Park and the Study of Tao and Katen Islands-possibility to establish a New National Park	RFD	n.a.	Phase-II	Study Team
		4. Study of Tourism Villages at Kanchanadit, Phumriang, Oyster Farm, Rambutan in Surat Thani, Talumphuk Headland in Nakon Si Thammarat and Fisherman's village in Chumphon	TAT/DFA	n.a.	Phase-II	Study Team
5. Conservation and Tourism Development of the City of Nakon Si Thammarat		DFA/TAT	n.a.	Phase-II	Study Team	
6. Study of Beach and Recreational Parks -Sichon and Tha Sala beaches -Tung Song waterfall and caves -Kra Rom waterfall in Lan Saka		TAT/RFD	n.a.	Phase-II	Study Team	
8. Conservation and Tourism Development of Khao Luang National Park which is scheduled to prepare Management Plan by RFD in 1991		RFD	n.a.	Phase-II	RFD	
H O T E L		1. Ko Samui/Ko Phangan (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team
	2. Ko Samui/Ko Phangan (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team	
	3. Surat Thani province including Chaiya, excluding Ko Samui/Phangan (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team	
	4. Surat Thani Province including Chaiya, excluding Ko Samui/Phangan (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team	
	5. Nakon Si Thammarat Province (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team	
	6. Nakon Si Thammarat Province (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team	
	7. Chumphon Province (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team	
	8. Chumphon Province (No. of rooms) High class: 1,000 (add.) or 1,000 (in total) Low class : 1,000 (add.) or 1,000 (in total)	Private	n.a.	Phase-II	Study Team	