添付表

表 S.1　総括事業費 (No.3 + No.4 プロジェクト)

(million US$)

Description	No.3	No.4	Total
I. Base Cost			
(1) Preparatory Works (LCB)			
L-1 : Access road	4.0	5.4	9.4
L-2 : Base camp	2.0	2.0	4.0
L-3 : Power supply system	0.5	0.1	0.6
Subtotal (1)	6.5	7.5	14.0
(2) Main Construction Works (ICB)			
I-1-3/4 : Diversion Tunnel	24.7	17.5	42.2
I-2-3/4 : Main Civil Works	178.0	139.2	317.2
I-3-3/4 : Hydromechanical Works	21.2	21.1	42.3
I-4-3/4 : Hydroelectrical Works	57.9	69.6	127.5
I-5-3/4 : Transmission Line	5.1	4.7	9.8
Subtotal (2)	286.9	252.1	539.0
Subtotal (1)+(2)	293.4	259.6	553.0
(3) Engineering Service	22.0	19.5	41.5
(4) Administration	2.1	1.8	3.9
(5) Land Compensation and Resettlement	10.6	0.0	10.6
Subtotal (1) to (5)	328.1	280.9	609.0
(6) Tax	15.8	14.0	14.0
Subtotal I (Base cost)	343.9	294.9	638.8
II. Contingency			
Price Contingency	22.6	21.3	43.9
Physical Contingency	30.0	24.4	54.4
Subtotal II (Contingency)	52.6	45.7	98.3
Total Project Cost	396.5	340.6	737.1

表 S.2 経済的内部収益率計算

(Unit: US$ million)

		Capital costs					Economic benefits				Total benefits		B - C	
					O & M	Total	Case A		Case B		Case A:	Case B:	Case A:	Case B:
No.	Year	F.C.	L.C.	Total	costs	costs	Dong Nai	Tri An	Dong Nai	Tri An	Alt.Therm.	LRMC	Alt.Therm.	LRMC
1	2001	5.1	2.3	7.4		7.4					0.0	0.0	(7.4)	(7.4)
2	2002	6.4	9.2	15.6		15.6					0.0	0.0	(15.6)	(15.6)
3	2003	16.8	22.0	38.8		38.8					0.0	0.0	(38.8)	(38.8)
4	2004	38.3	34.7	73.0		73.0					0.0	0.0	(73.0)	(73.0)
5	2005	68.7	50.5	119.2		119.2					0.0	0.0	(119.2)	(119.2)
6	2006	119.1	59.8	178.9		178.9					0.0	0.0	(178.9)	(178.9)
7	2007	112.5	56.3	168.8		168.8					0.0	0.0	(168.8)	(168.8)
8	2008	27.3	14.2	41.5	2.6	44.1	49.5	1.9	50.3	5.9	51.4	56.2	7.3	12.1
9	2009	3.3	0.4	3.7	5.6	9.3	106.0	1.9	106.5	5.9	107.9	112.4	98.6	103.1
10	2010				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
11	2011				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
12	2012				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
13	2013				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
14	2014				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
15	2015				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
16	2016				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
17	2017				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
18	2018				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
19	2019				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
20	2020				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
21	2021				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
22	2022				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
23	2023				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
24	2024				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
25	2025				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
26	2026				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
27	2027				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
28	2028				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
29	2029			178.5	6.2	184.7	116.6	1.9	117.1	5.9	118.5	123.0	(66.2)	(61.7)
30	2030				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
31	2031				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
32	2032				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
33	2033				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
34	2034				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
35	2035				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
36	2036				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
37	2037				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
38	2038				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
39	2039				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
40	2040				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
41	2041				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
42	2042				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
43	2043				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
44	2044				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
45	2045				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
46	2046				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
47	2047				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
48	2048			178.5	6.2	184.7	116.6	1.9	117.1	5.9	118.5	123.0	(66.2)	(61.7)
49	2049				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
50	2050				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
51	2051				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
52	2052				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
53	2053				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
54	2054				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
55	2055				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
56	2056				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
57	2057				6.2	6.2	116.6	1.9	117.1	5.9	118.5	123.0	112.3	116.8
58	2058			(124.3)	6.2	(118.1)	116.6	1.9	117.1	5.9	118.5	123.0	236.6	241.1
												EIRR =	13.1%	13.5%

Note: 1) Abbreviations:
F.C.: Foreign currency portion
L.C.: Local currency portion
O & M: Operation and maintenance costs
Alt.Therm.: Alternative thermal

表 S.3 財務的内部収益率の計算 (FIRR)

(in case of 4.5 USc/kWh)

(Unit: US$ million)

No.	Year	Capital costs F.C.	Capital costs L.C.	Capital costs Total	O&M costs	Total costs	Saleable energy (GWh)	Power rate (USc/kWh)	Financial revenue	Resources tax & VAT	Current surplus	B - C
1	2001	5.2	2.7	7.9		7.9						(7.9)
2	2002	6.6	11.8	18.4		18.4						(18.4)
3	2003	17.4	26.8	44.2		44.2						(44.2)
4	2004	40.1	42.4	82.5		82.5						(82.5)
5	2005	72.6	62.3	134.9		134.9						(134.9)
6	2006	124.6	75.7	200.3		200.3						(200.3)
7	2007	119.2	70.0	189.2		189.2						(189.2)
8	2008	28.2	17.4	45.6	2.5	48.1	757	4.5	34.1	4.1	30.0	(18.2)
9	2009	3.6	0.6	4.2	5.4	9.6	1,514	4.5	68.1	8.2	60.0	50.3
10	2010				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
11	2011				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
12	2012				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
13	2013				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
14	2014				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
15	2015				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
16	2016				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
17	2017				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
18	2018				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
19	2019				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
20	2020				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
21	2021				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
22	2022				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
23	2023				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
24	2024				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
25	2025				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
26	2026				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
27	2027				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
28	2028				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
29	2029			169.8	6.0	175.8	1,657	4.5	74.6	8.9	65.6	(110.2)
30	2030				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
31	2031				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
32	2032				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
33	2033				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
34	2034				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
35	2035				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
36	2036				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
37	2037				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
38	2038				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
39	2039				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
40	2040				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
41	2041				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
42	2042				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
43	2043				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
44	2044				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
45	2045				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
46	2046				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
47	2047				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
48	2048			169.8	6.0	175.8	1,657	4.5	74.6	8.9	65.6	(110.2)
49	2049				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
50	2050				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
51	2051				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
52	2052				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
53	2053				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
54	2054				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
55	2055				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
56	2056				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
57	2057				6.0	6.0	1,657	4.5	74.6	8.9	65.6	59.6
58	2058			(120.8)	6.0	(114.8)	1,657	4.5	74.6	8.9	65.6	180.4
									FIRR=			6.5%

Note: 1) Abbreviations:
F.C.: Foreign currency portion
L.C.: Local currency portion
2) Project construction cost excluding Transmission Line cost:

	F.C.	L.C.	Total
Civil	176.9	182.4	359.3
Metal	150.6	19.2	169.8
Others	90.0	108.1	198.1
Total	417.5	309.7	727.2

表 S.4　プロジェクトローン返済計画検討 (ケース 1-1)

Tariff rate=USc4.5/kWh:FC:LC=85%:15%; FC=3.5% p.a.　　(US$ million)

No.	Year	Power sales revenue	Loans received: Foreign (85%)	Loans received: Domestic (15%)	Total sources	Capital costs: F.C.	Capital costs: L.C.	Capital costs: Total	O & M costs	Outstanding loan principal	Repayment of principal	Interest payment: Foreign (3.5%)	Interest payment: Domestic (13.0%)	Resources tax & VAT	Total uses	Current surplus	Corporate tax payment	Surplus after tax	Cumulative surplus	Year
1	2001		6.7	1.2	7.9	5.2	2.7	7.9		7.9				0.0	7.9	0.0	0.0	0.0	0.0	2001
2	2002		15.6	2.8	18.4	6.6	11.8	18.4		26.3				0.0	18.4	0.0	0.0	0.0	0.0	2002
3	2003		37.6	6.6	44.2	17.4	26.8	44.2		70.5				0.0	44.2	0.0	0.0	0.0	0.0	2003
4	2004		70.1	12.4	82.5	40.1	42.4	82.5		153.0				0.0	82.5	0.0	0.0	0.0	0.0	2004
5	2005		114.7	20.2	134.9	72.6	62.3	134.9		287.9				0.0	134.9	0.0	0.0	0.0	0.0	2005
6	2006		170.3	30.0	200.3	124.6	75.7	200.3		488.2				0.0	200.3	0.0	0.0	0.0	0.0	2006
7	2007		160.8	28.4	189.2	119.2	70.0	189.2		677.4				0.0	189.2	0.0	0.0	0.0	0.0	2007
8	2008	34.1	38.8	6.8	79.7	28.2	17.4	45.6	2.5	723.0				4.1	52.2	27.4	6.9	20.6	20.6	2008
9	2009	68.1	3.6	0.6	72.3	3.6	0.6	4.2	5.4	727.2				8.2	17.8	54.5	13.6	40.9	61.5	2009
10	2010	74.6			74.6				6.0	695.7	31.5	21.7	14.9	8.9	83.1	(8.5)	0.0	(8.5)	53.0	2010
11	2011	74.6			74.6				6.0	664.2	31.5	20.2	11.3	8.9	78.0	(3.5)	0.0	(3.5)	49.5	2011
12	2012	74.6			74.6				6.0	632.7	31.5	19.5	9.9	8.9	75.9	(1.3)	0.0	(1.3)	48.1	2012
13	2013	74.6			74.6				6.0	601.2	31.5	18.7	8.5	8.9	73.8	0.8	0.2	0.6	48.7	2013
14	2014	74.6			74.6				6.0	569.6	31.5	18.0	7.1	8.9	71.6	2.9	0.7	2.2	51.0	2014
15	2015	74.6			74.6				6.0	538.1	31.5	17.3	5.7	8.9	69.5	5.1	1.3	3.8	54.8	2015
16	2016	74.6			74.6				6.0	506.6	31.5	16.6	4.3	8.9	67.3	7.2	1.8	5.4	60.2	2016
17	2017	74.6			74.6				6.0	475.1	31.5	15.9	2.8	8.9	65.2	9.4	2.3	7.0	67.2	2017
18	2018	74.6			74.6				6.0	443.6	31.5	15.1	1.4	8.9	63.1	11.5	2.9	8.6	75.8	2018
19	2019	74.6			74.6				6.0	412.1	31.5	14.4	0.0	8.9	60.9	13.6	3.4	10.2	86.1	2019
20	2020	74.6			74.6				6.0	391.5	20.6	13.7	0.0	8.9	49.3	25.3	6.3	19.0	105.0	2020
21	2021	74.6			74.6				6.0	370.9	20.6	13.0	0.0	8.9	48.6	26.0	6.5	19.5	124.5	2021
22	2022	74.6			74.6				6.0	350.3	20.6	12.3	0.0	8.9	47.9	26.7	6.7	20.0	144.5	2022
23	2023	74.6			74.6				6.0	329.7	20.6	11.5	0.0	8.9	47.1	27.4	6.9	20.6	165.1	2023
24	2024	74.6			74.6				6.0	309.1	20.6	10.8	0.0	8.9	46.4	28.2	7.0	21.1	186.2	2024
25	2025	74.6			74.6				6.0	288.5	20.6	10.1	0.0	8.9	45.7	28.9	7.2	21.7	207.9	2025
26	2026	74.6			74.6				6.0	267.9	20.6	9.4	0.0	8.9	45.0	29.6	7.4	22.2	230.1	2026
27	2027	74.6			74.6				6.0	247.2	20.6	8.7	0.0	8.9	44.2	30.3	7.6	22.7	252.8	2027
28	2028	74.6			74.6				6.0	226.6	20.6	7.9	0.0	8.9	43.5	31.0	7.8	23.3	276.1	2028
29	2029	74.6			74.6			169.8	6.0	206.0	20.6	7.2	0.0	8.9	212.6	(138.0)	0.0	(138.0)	138.1	2029
30	2030	74.6			74.6				6.0	185.4	20.6	6.5	0.0	8.9	42.1	32.5	8.1	24.4	162.4	2030
31	2031	74.6			74.6				6.0	164.8	20.6	5.8	0.0	8.9	41.4	33.2	8.3	24.9	187.3	2031
32	2032	74.6			74.6				6.0	144.2	20.6	5.0	0.0	8.9	40.6	33.9	8.5	25.4	212.8	2032
33	2033	74.6			74.6				6.0	123.6	20.6	4.3	0.0	8.9	39.9	34.6	8.7	26.0	238.8	2033
34	2034	74.6			74.6				6.0	103.0	20.6	3.6	0.0	8.9	39.2	35.4	8.8	26.5	265.3	2034
35	2035	74.6			74.6				6.0	82.4	20.6	2.9	0.0	8.9	38.5	36.1	9.0	27.1	292.4	2035
36	2036	74.6			74.6				6.0	61.8	20.6	2.2	0.0	8.9	37.8	36.8	9.2	27.6	320.0	2036
37	2037	74.6			74.6				6.0	41.2	20.6	1.4	0.0	8.9	37.0	37.5	9.4	28.1	348.1	2037
38	2038	74.6			74.6				6.0	20.6	20.6	0.7	0.0	8.9	36.3	38.3	9.6	28.7	376.8	2038
39	2039	74.6			74.6				6.0	0.0	20.6	0.0	0.0	8.9	35.6	39.0	9.7	29.2	406.0	2039
40	2040	74.6			74.6				6.0	0.0	0.0	0.0	0.0	8.9	15.0	59.6	14.9	44.7	450.7	2040

Note: 1) Abbreviations:
F.C.: Foreign currency portion
L.C.: Local currency portion
2) Project construction cost:

	F.C.	L.C.	Total
Civil	176.9	182.4	359.3
Metal	150.6	19.2	169.8
Others	90.0	108.1	198.1
Total	417.5	309.7	727.2

添付図

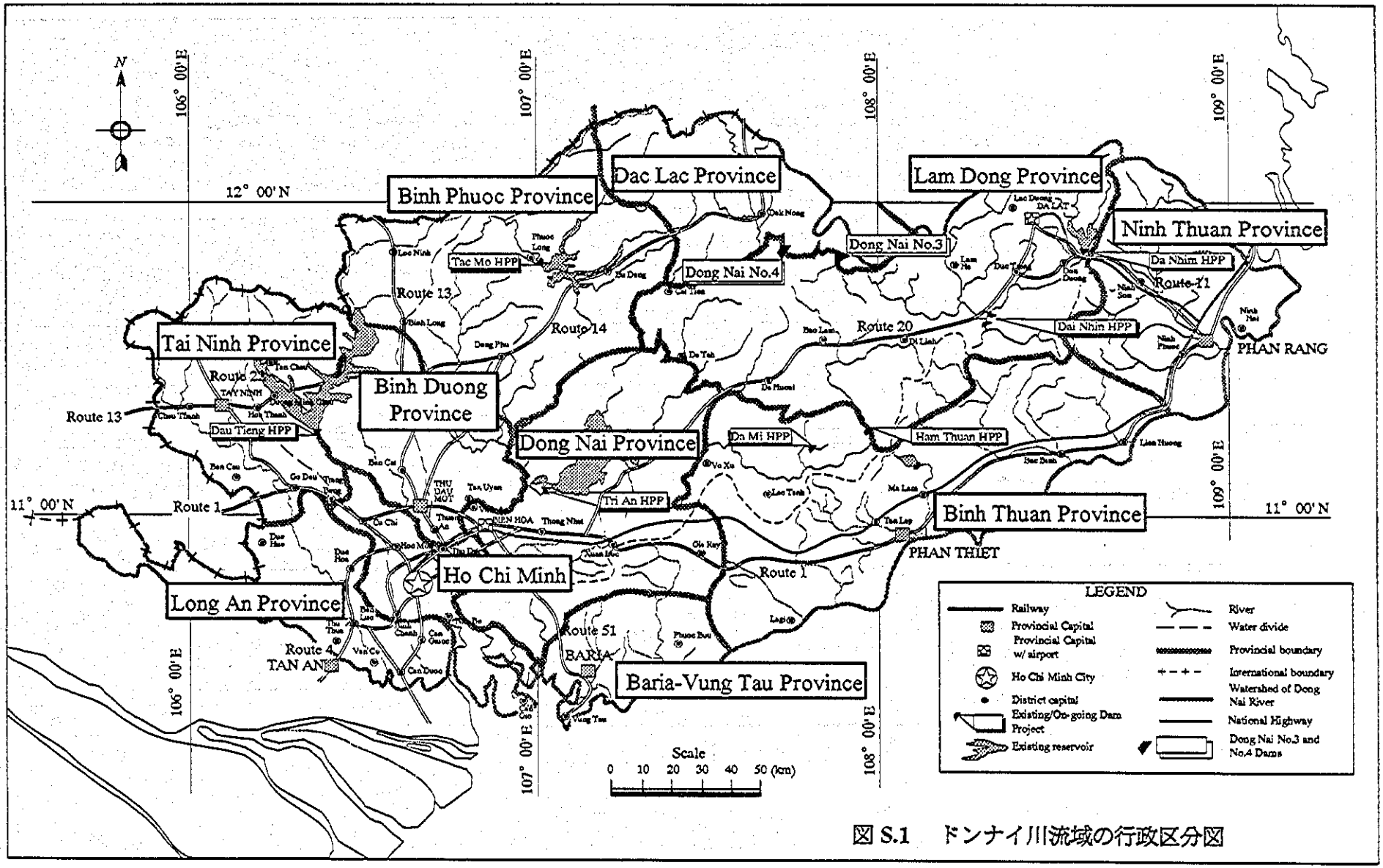


図 S.1　ドンナイ川流域の行政区分図

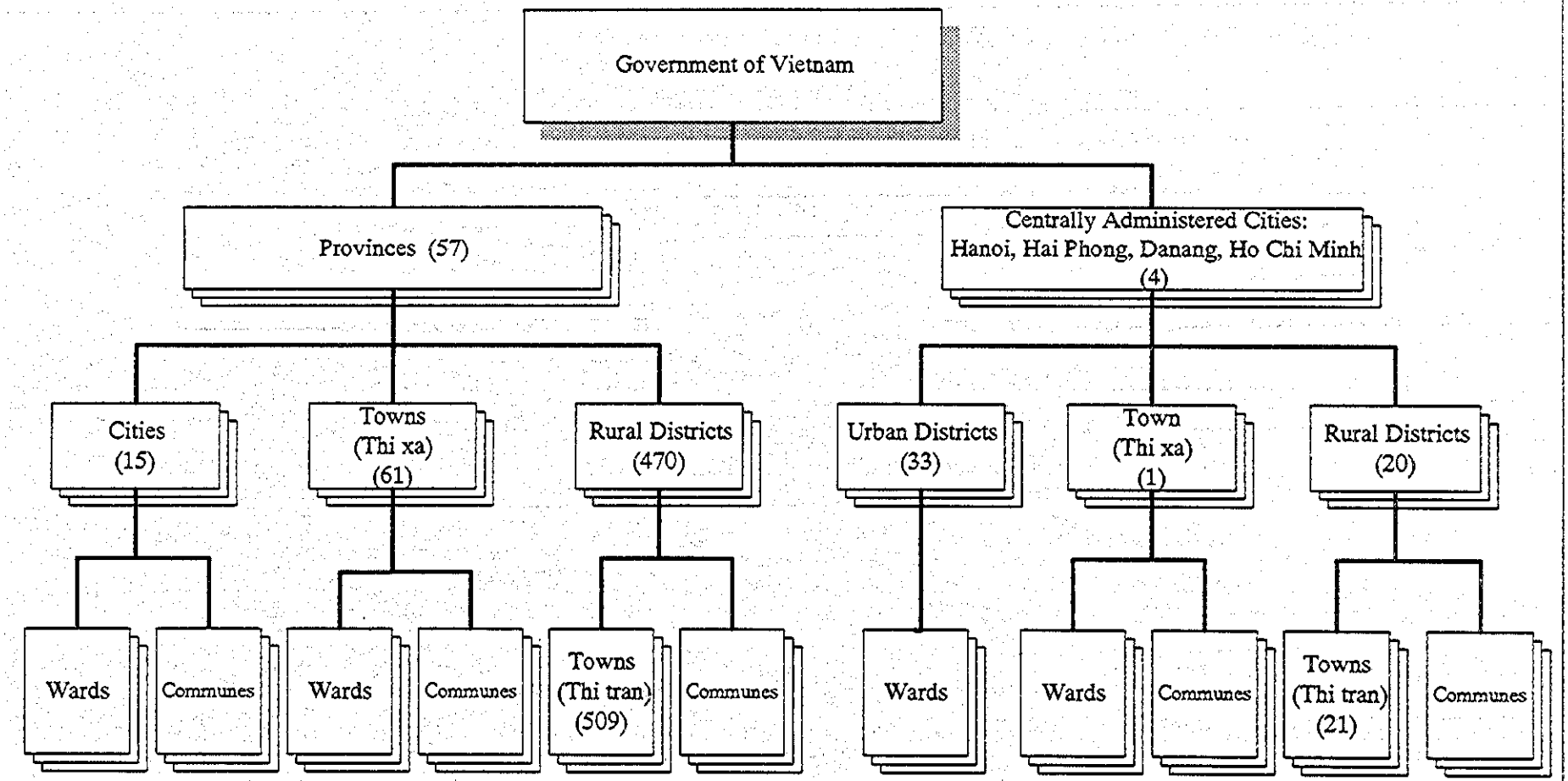


図 S.2　ヴィエトナムの行政組織構造

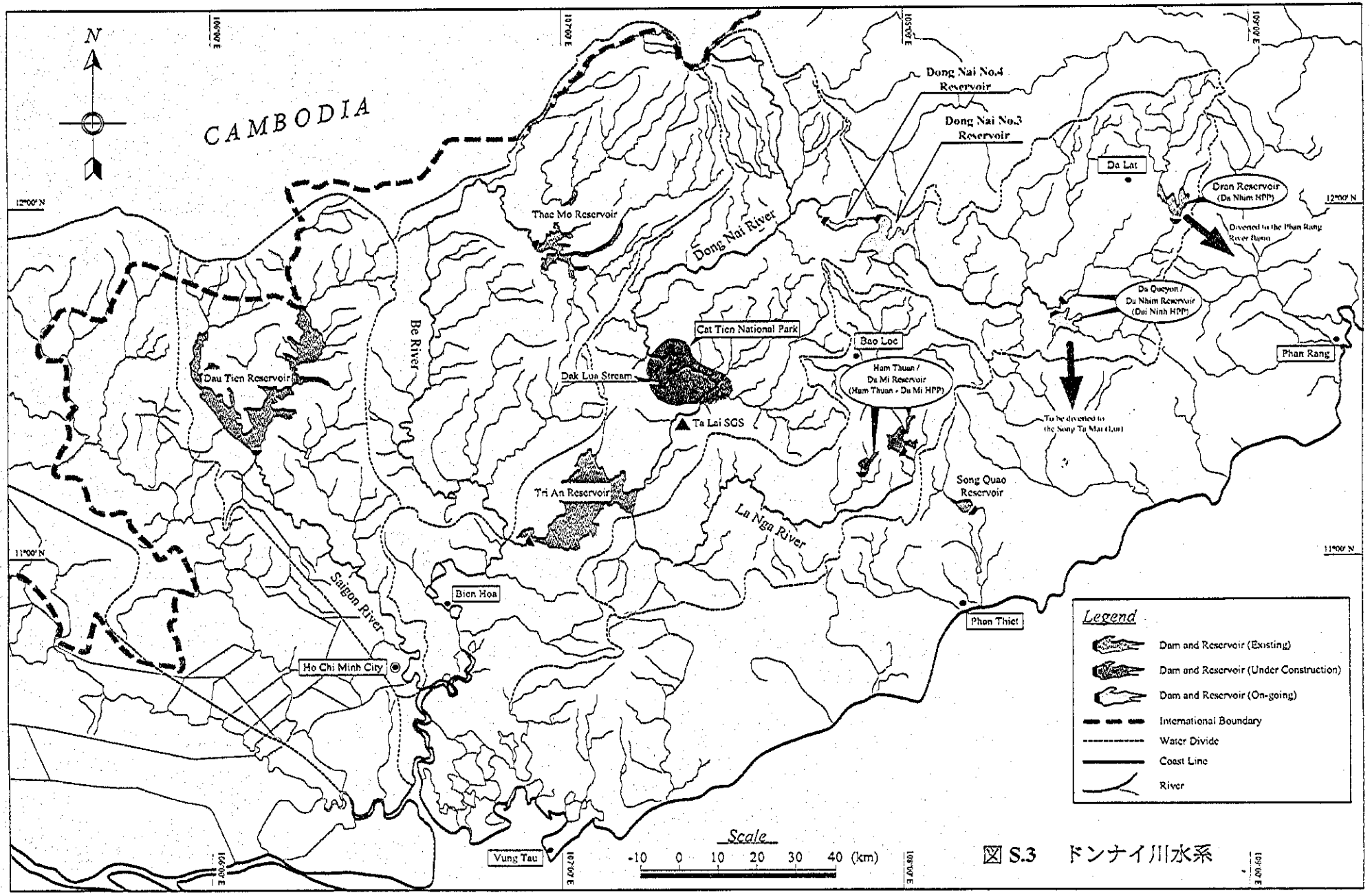

N
CAMBODIA
Dong Nai No.4 Reservoir
Dong Nai No.3 Reservoir
Da Lat
Dran Reservoir (Da Nhim HPP)
Diverted to the Phan Rang River Basin
Thac Mo Reservoir
Dong Nai River
Da Quynh / Da Nhim Reservoir (Dai Ninh HPP)
Cat Tien National Park
Bao Loc
Phan Rang
Dau Tieng Reservoir
Be River
Dak Lua Stream
Ham Thuan / Da Mi Reservoir (Ham Thuan + Da Mi HPP)
Ta Lai SGS
To be diverted to the Song Ta Mai (Lan)
Song Quao Reservoir
Tri An Reservoir
La Nga River
Saigon River
Bien Hoa
Phan Thiet
Ho Chi Minh City
Vung Tau
Legend
Dam and Reservoir (Existing)
Dam and Reservoir (Under Construction)
Dam and Reservoir (On-going)
International Boundary
Water Divide
Coast Line
River
Scale
-10 0 10 20 30 40 (km)

図 S.3　ドンナイ川水系

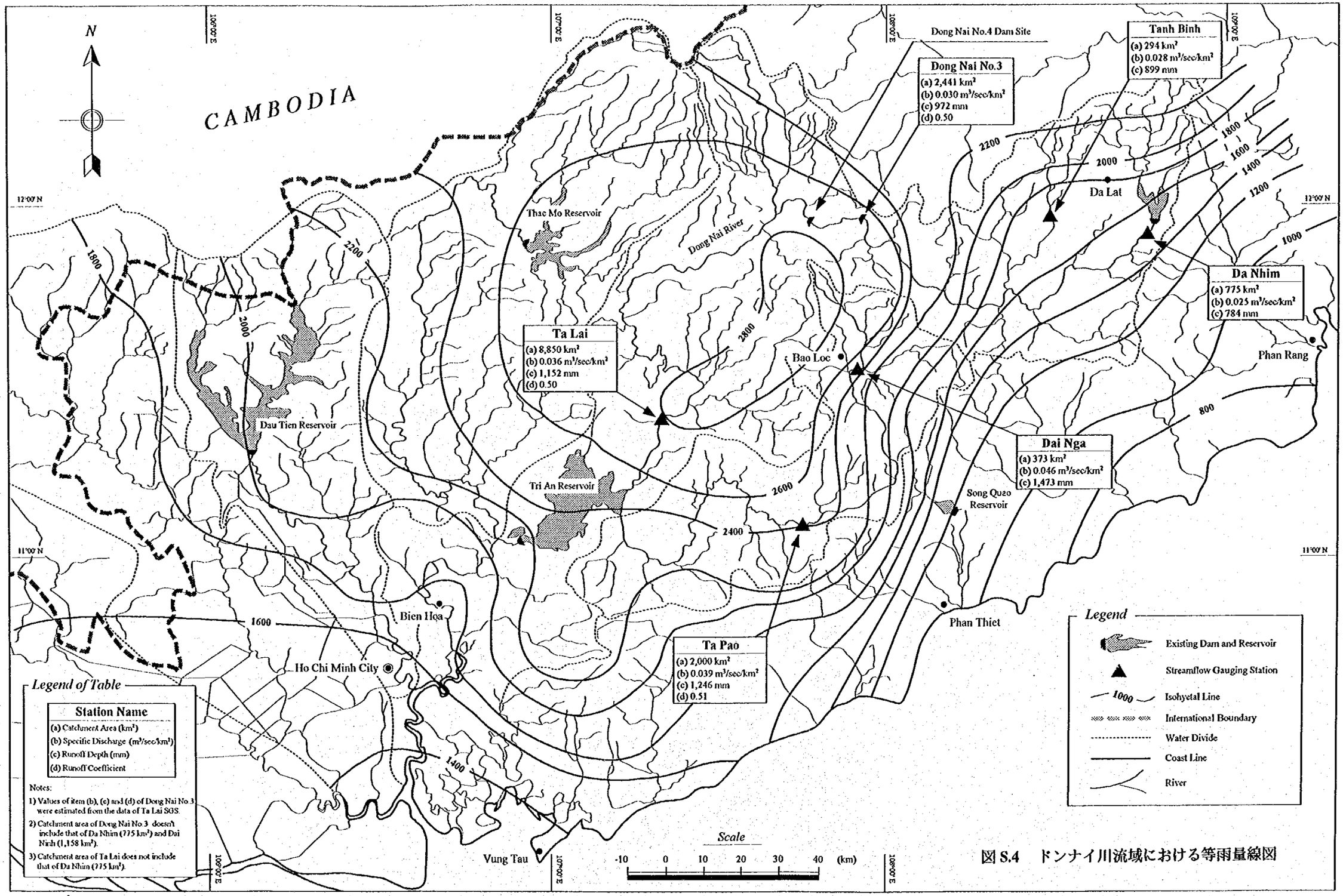


図 S.4　ドンナイ川流域における等雨量線図

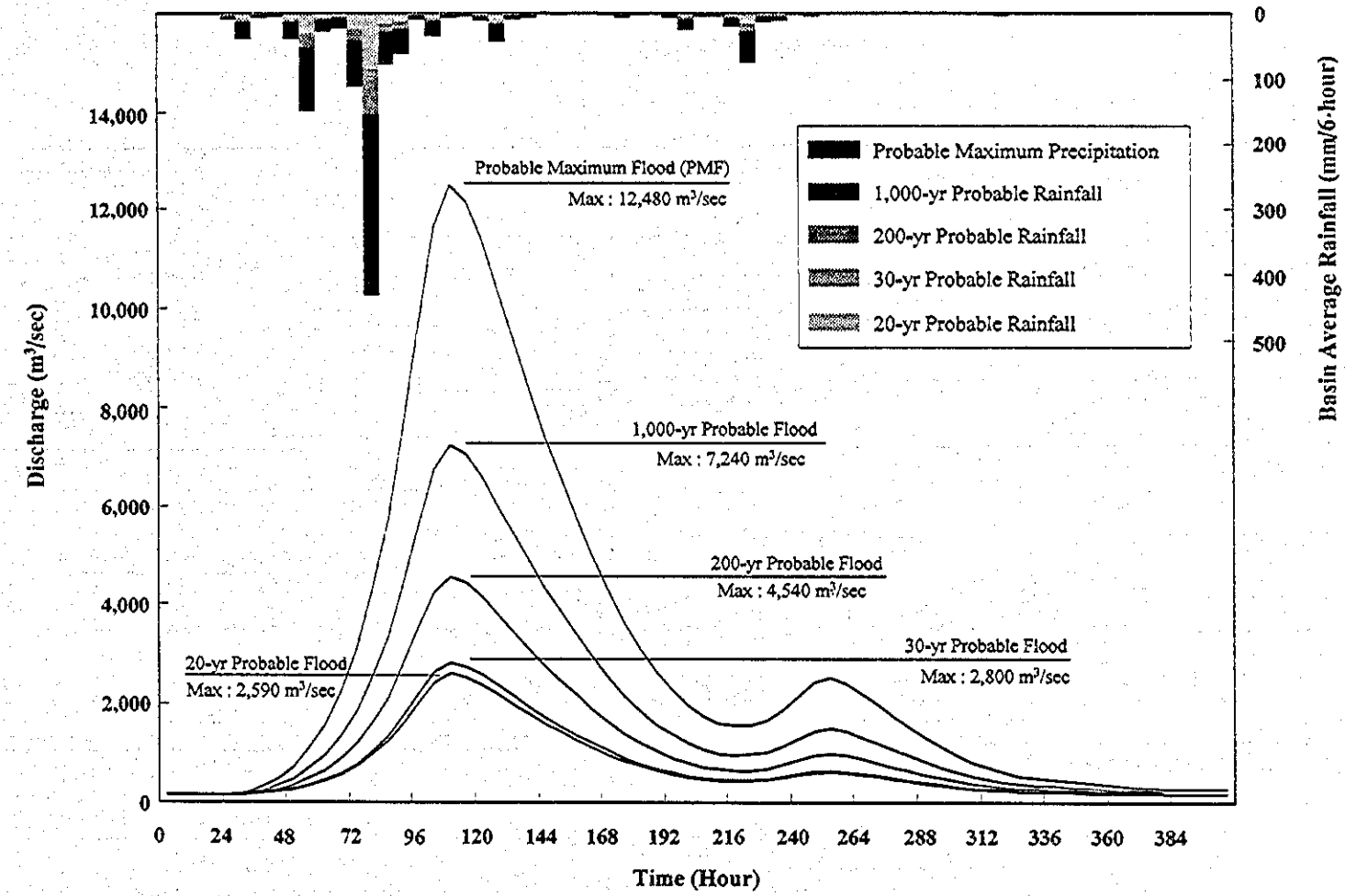


図 S.5　単位図法により推定された確率洪水ハイドログラフ

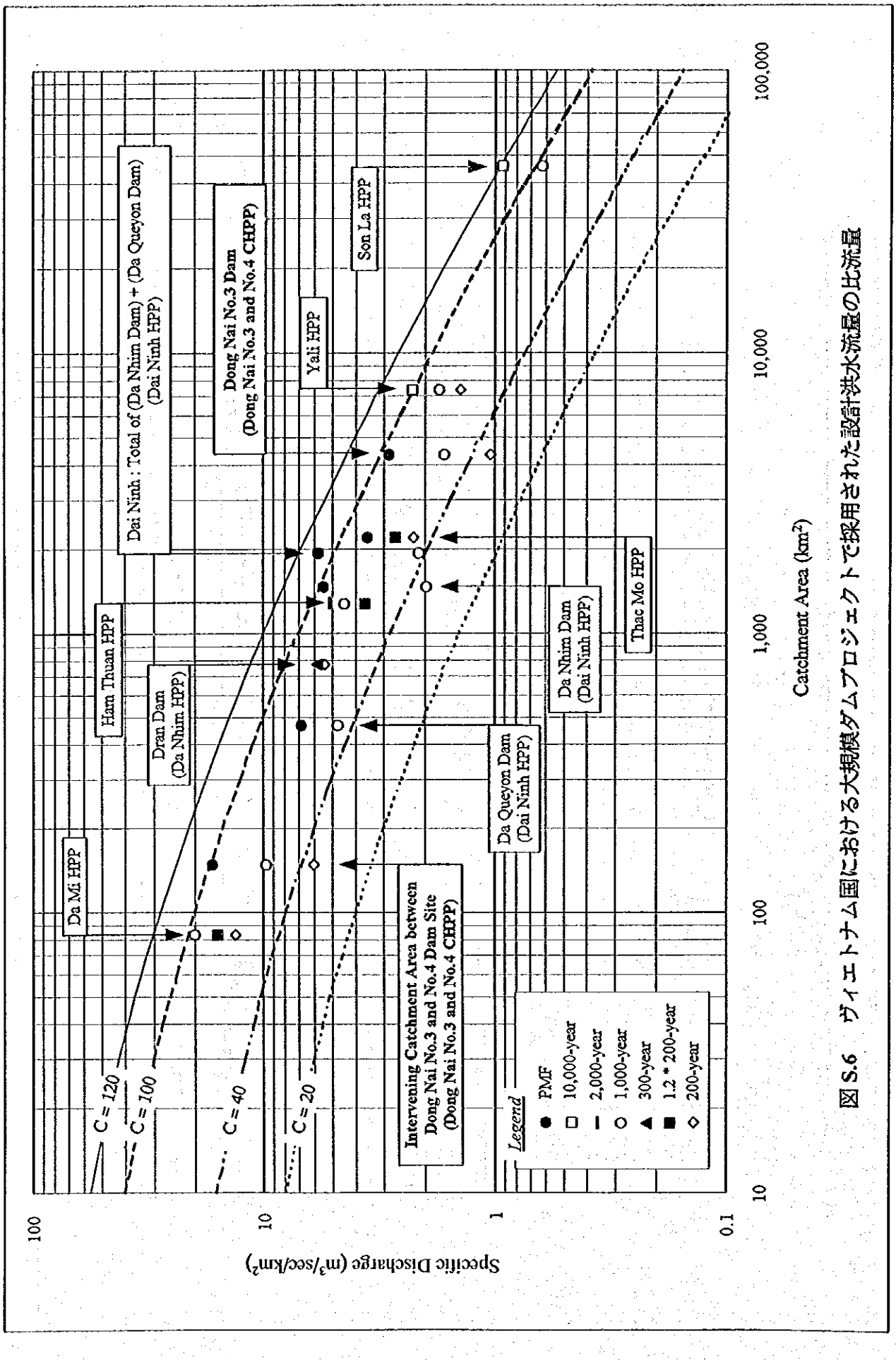


図 S.6　ヴィエトナム国における大規模ダムプロジェクトで採用された設計洪水流量の比流量

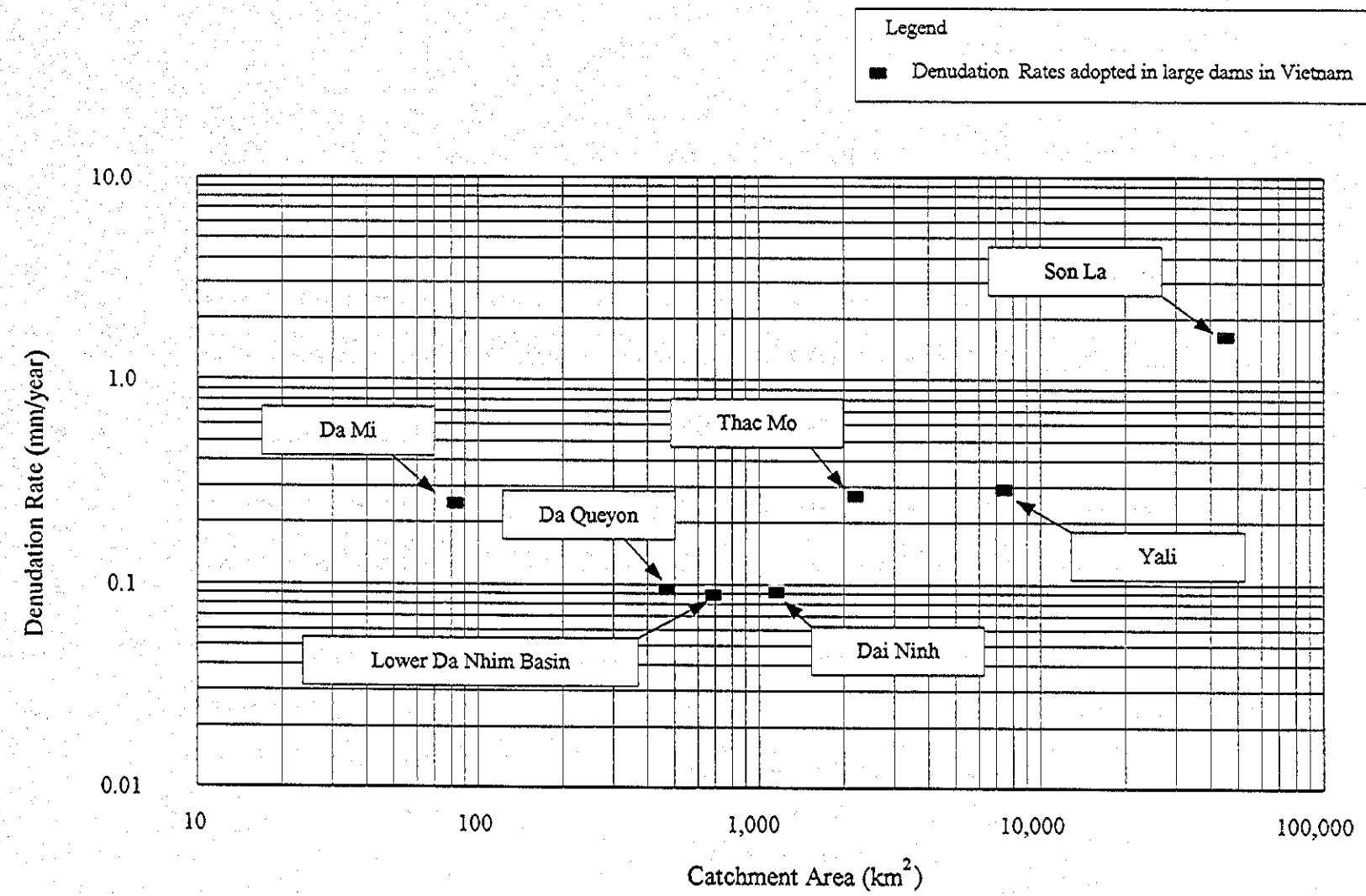
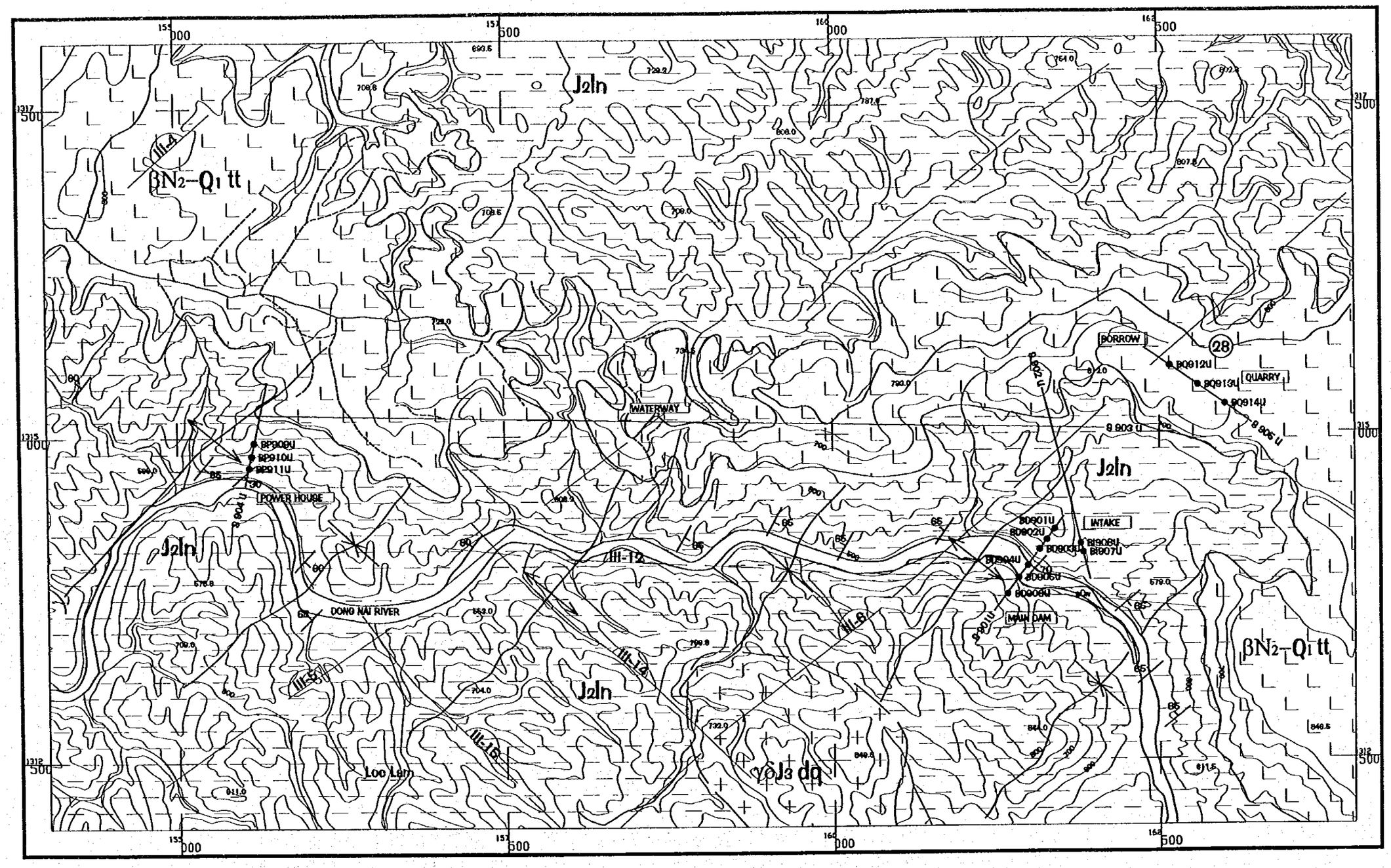


図 S.7　ヴィエトナム国の各プロジェクトで採用された表面侵食率と流域面積の関係



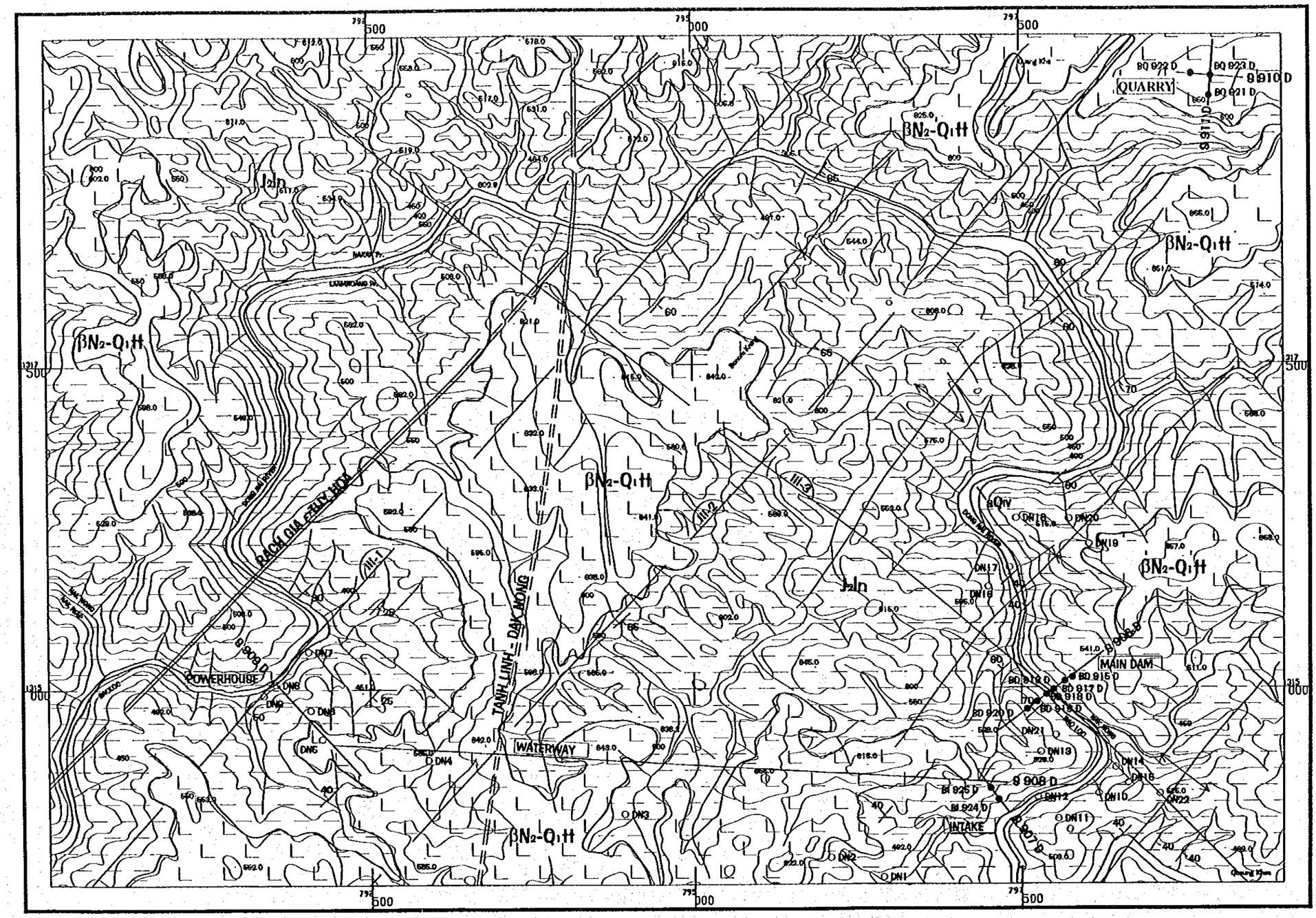
LEGEND

Symbol	Rock Unit (Member)	Corresponding formation in geologic map	Age	
	Riverbed Deposit (aQIV)	Recent	Quaternary	Cenozoic
	(Unconformity)			
	(βN2-Q1)	Tuc trung formation	Plio-Pleistocene (Neogene)	
	(Unconformity)			
	Horblende granodiorite (γδJ3 dq)	Dinh Quan formation	Upper Jurassic	Mesozoic
	Sandstone, siltstone shale, hornfels (J2ln)	Langa formation	Middle Jurassic	

Boundary of strata
Fault
Strike and dip of fault
Strike and dip of sedimentary rock
Synclinal axis
Anticlinal axis
S 906 U — Seismic prospecting line
BD 903 U ● F/S Bore hole
28 — National road
Path

0 0.5 1.0 km

図 S.8　ドンナイ第 3 計画地域地質図



LEGEND

Symbol	Rock Unit (Member)	Corresponding formation in regional geologic map	Age
	Riverbed-Deposit (βQiv)		Quaternary
~~	(Unconformity)		
	Basalt Lava (βN2-Q1tt)	Tuc Trung formation	Plio-Pleistocene (Neogene)
~~	(Unconformity)		
	Sandstone, siltstone, shale, hornfels (J2ln)	Lange formation	Middle Jurassic

Boundary of strata
Fault
Strike and dip of fault
Strike and dip of sedimentary rock
Synclinal axis
Anticlinal axis
S 908 D — Seismic prospecting line (F/S)
DN 10 ○ Bore hole (Pre-F/S)
BD 915 D ● Bore hole (F/S)

0 0.5 1.0 km

図 S.9　ドンナイ第 4 計画地域地質図

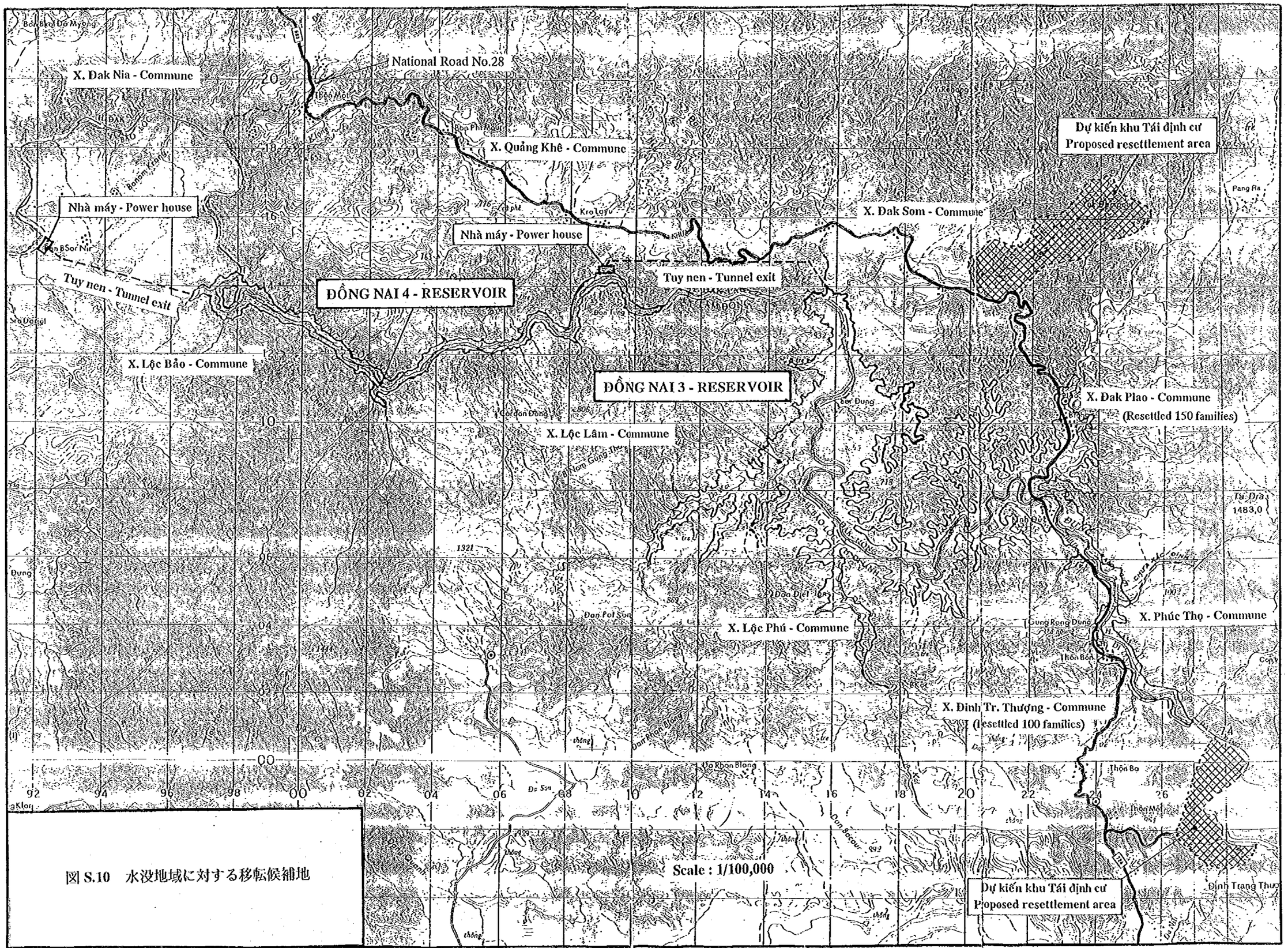


図 S.10　水没地域に対する移転候補地

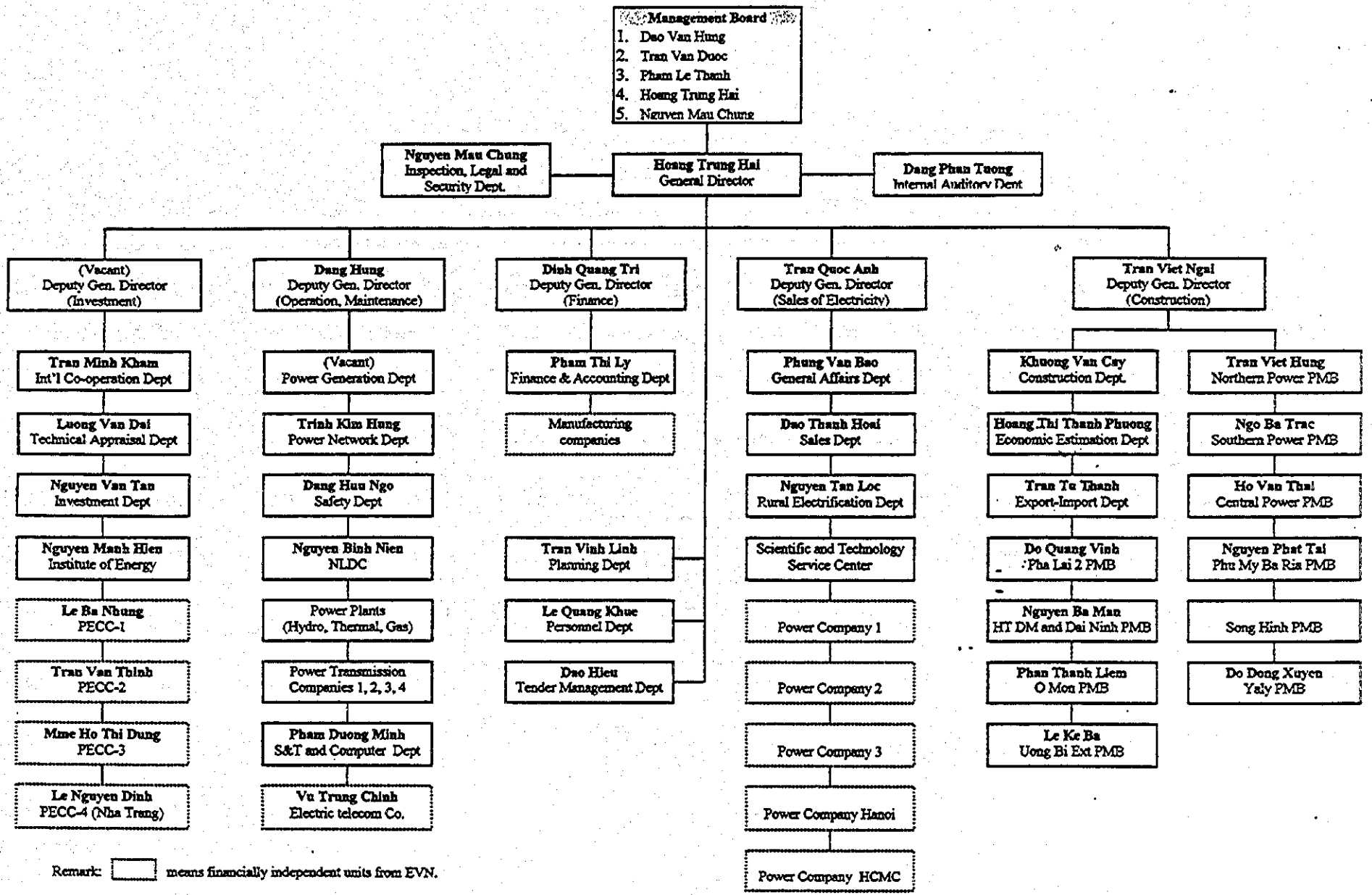

Management Board
1. Dao Van Hung
2. Tran Van Duoc
3. Pham Le Thanh
4. Hoang Trung Hai
5. Nguyen Mau Chung
Nguyen Mau Chung
Inspection, Legal and Security Dept.
Hoang Trung Hai
General Director
Dang Phan Tuong
Internal Auditory Dept
(Vacant)
Deputy Gen. Director
(Investment)
Dang Hung
Deputy Gen. Director
(Operation, Maintenance)
Dinh Quang Tri
Deputy Gen. Director
(Finance)
Tran Quoc Anh
Deputy Gen. Director
(Sales of Electricity)
Tran Viet Ngai
Deputy Gen. Director
(Construction)
Tran Minh Kham
Int'l Co-operation Dept
Luong Van Dai
Technical Appraisal Dept
Nguyen Van Tan
Investment Dept
Nguyen Manh Hien
Institute of Energy
Le Ba Nhung
PECC-1
Tran Van Thinh
PECC-2
Mme Ho Thi Dung
PECC-3
Le Nguyen Dinh
PECC-4 (Nha Trang)
(Vacant)
Power Generation Dept
Trinh Kim Hung
Power Network Dept
Dang Huu Ngo
Safety Dept
Nguyen Binh Nien
NLDC
Power Plants
(Hydro, Thermal, Gas)
Power Transmission
Companies 1, 2, 3, 4
Pham Duong Minh
S&T and Computer Dept
Vu Trung Chinh
Electric telecom Co.
Pham Thi Ly
Finance & Accounting Dept
Manufacturing companies
Tran Vinh Linh
Planning Dept
Le Quang Khue
Personnel Dept
Dao Hieu
Tender Management Dept
Phung Van Bao
General Affairs Dept
Dao Thanh Hoai
Sales Dept
Nguyen Tan Loc
Rural Electrification Dept
Scientific and Technology Service Center
Power Company 1
Power Company 2
Power Company 3
Power Company Hanoi
Power Company HCMC
Khuong Van Cay
Construction Dept.
Hoang Thi Thanh Phuong
Economic Estimation Dept
Tran Tu Thanh
Export-Import Dept
Do Quang Vinh
Pha Lai 2 PMB
Nguyen Ba Man
HT DM and Dai Ninh PMB
Phan Thanh Liem
O Mon PMB
Le Ke Ba
Uong Bi Ext PMB
Tran Viet Hung
Northern Power PMB
Ngo Ba Trac
Southern Power PMB
Ho Van Thai
Central Power PMB
Nguyen Phat Tai
Phu My Ba Ria PMB
Song Hinh PMB
Do Dong Xuyen
Yaly PMB
Remark: means financially independent units from EVN.

図 S.11　EVN 組織図

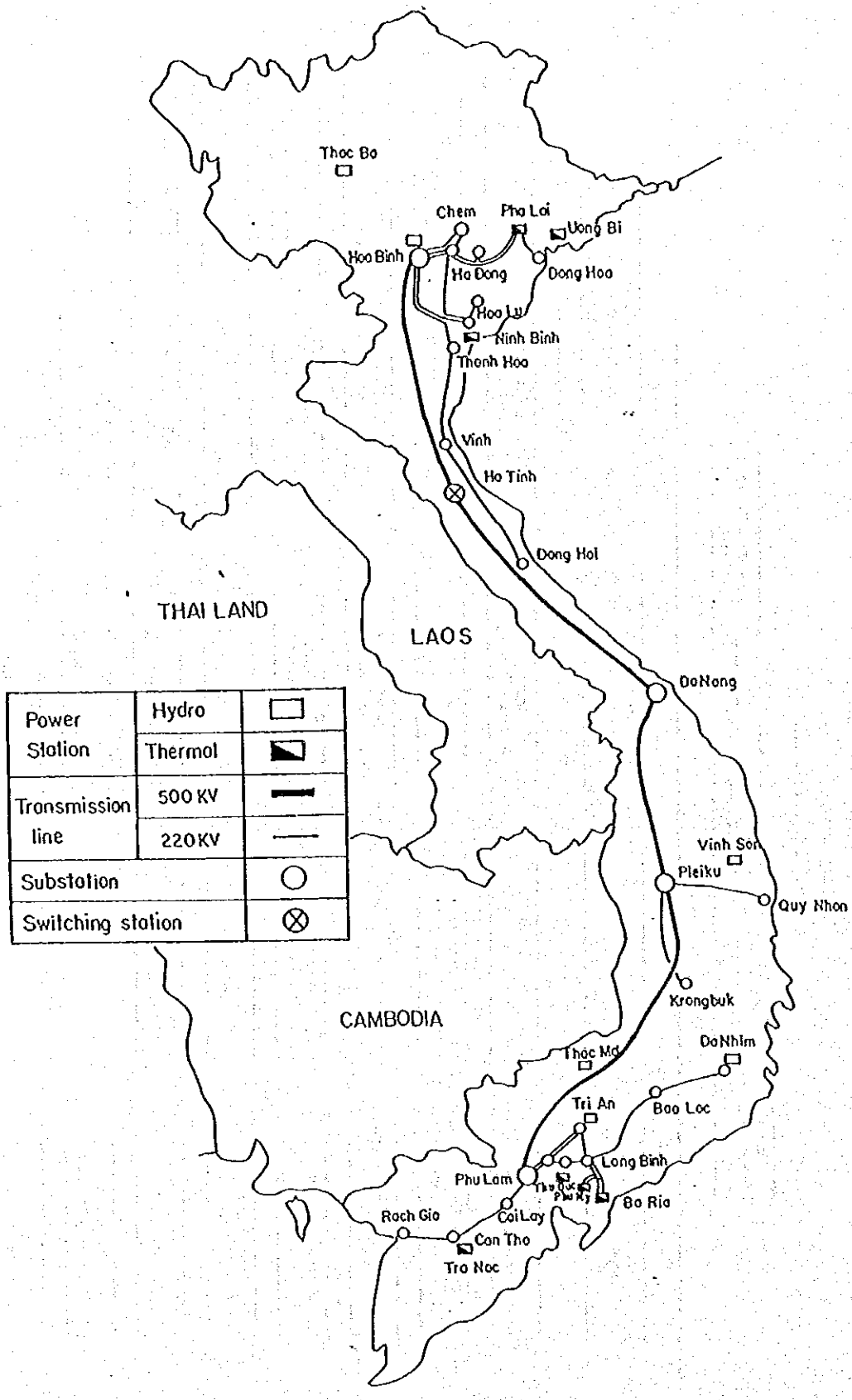


図 S.12　500 kV, 220 kV 系統地理的関係図

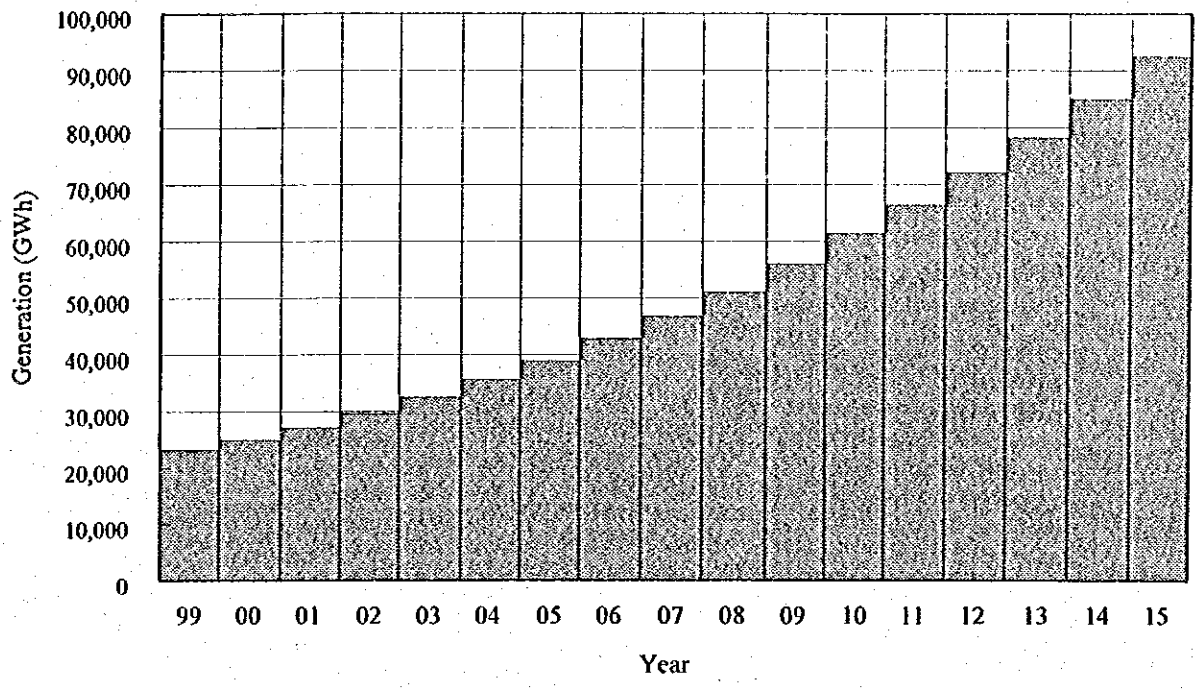


図 S.13　JICA調査団による発電電力量予測

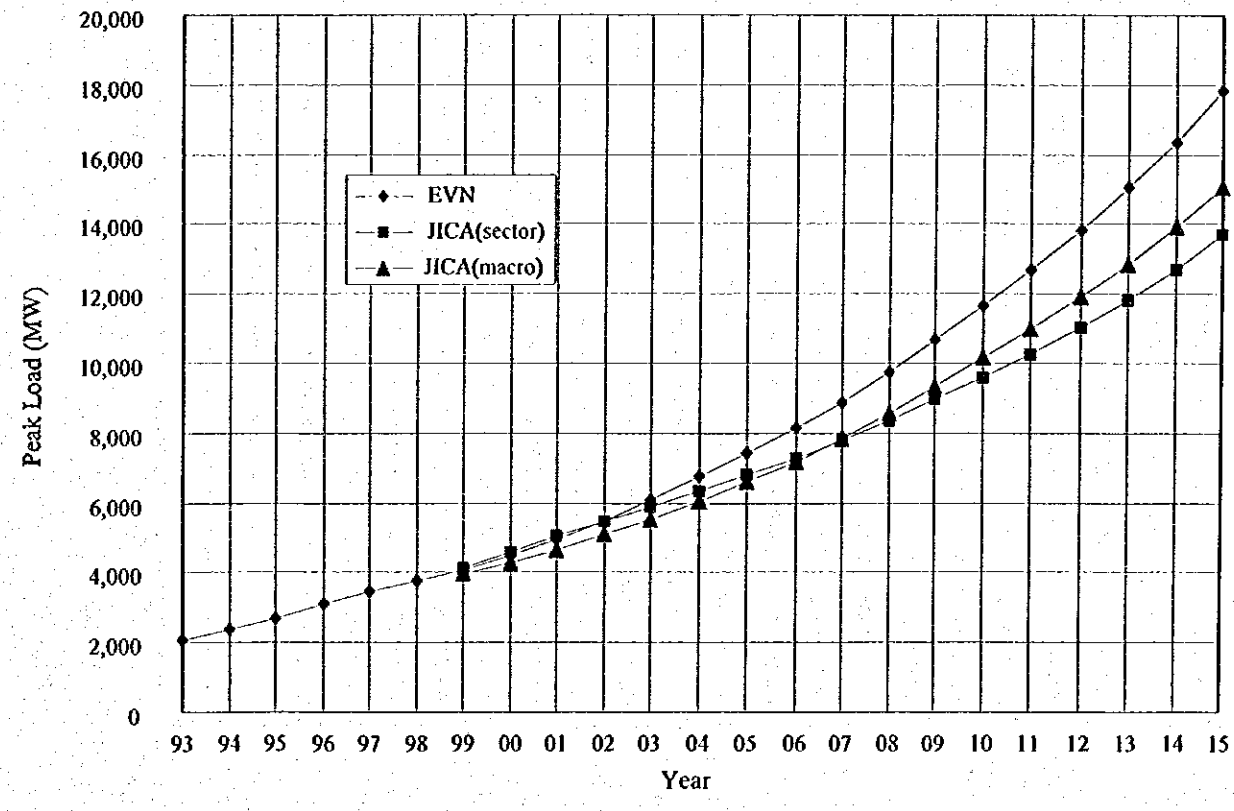


図 S.14　JICA調査団による最大電力予測

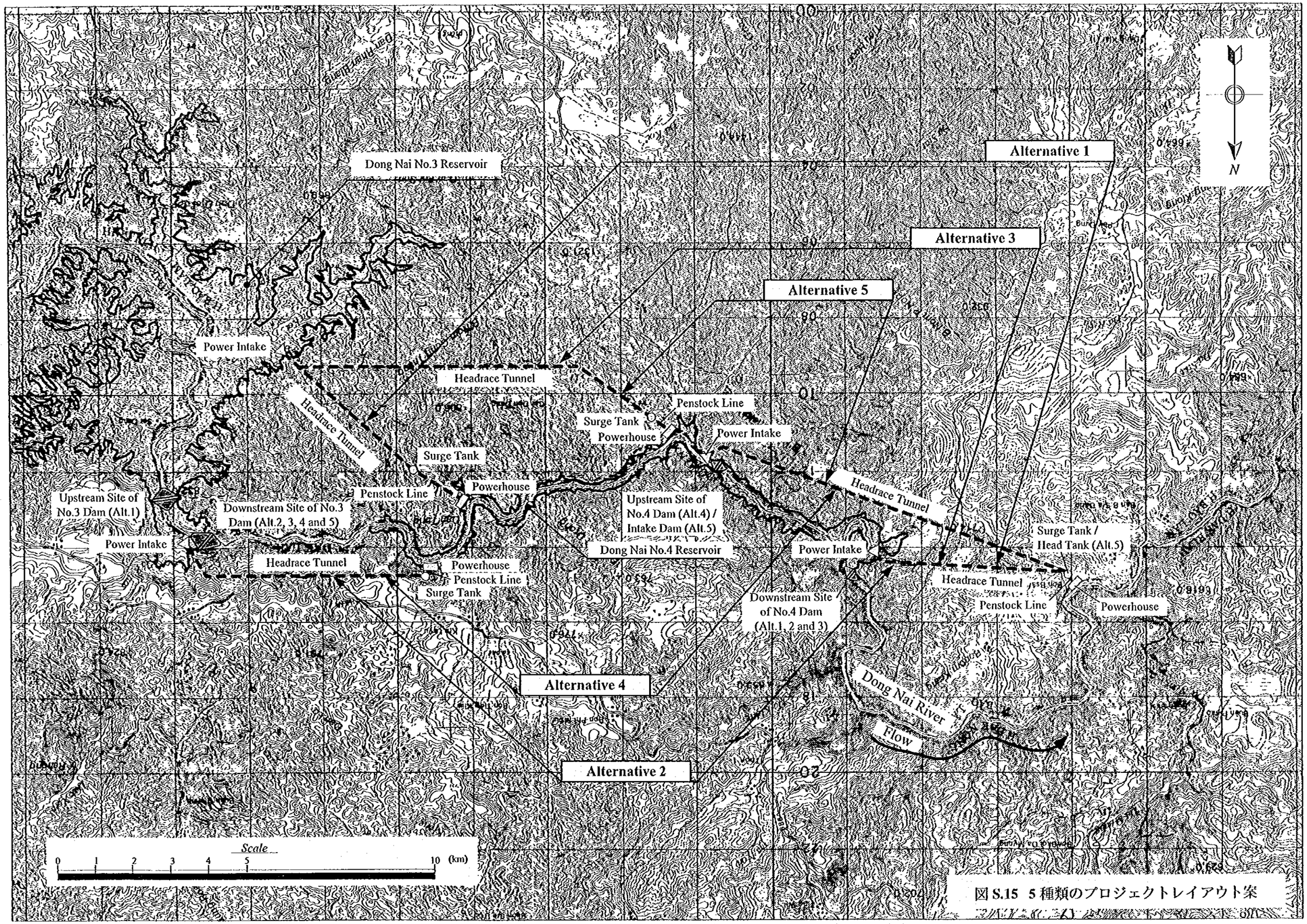
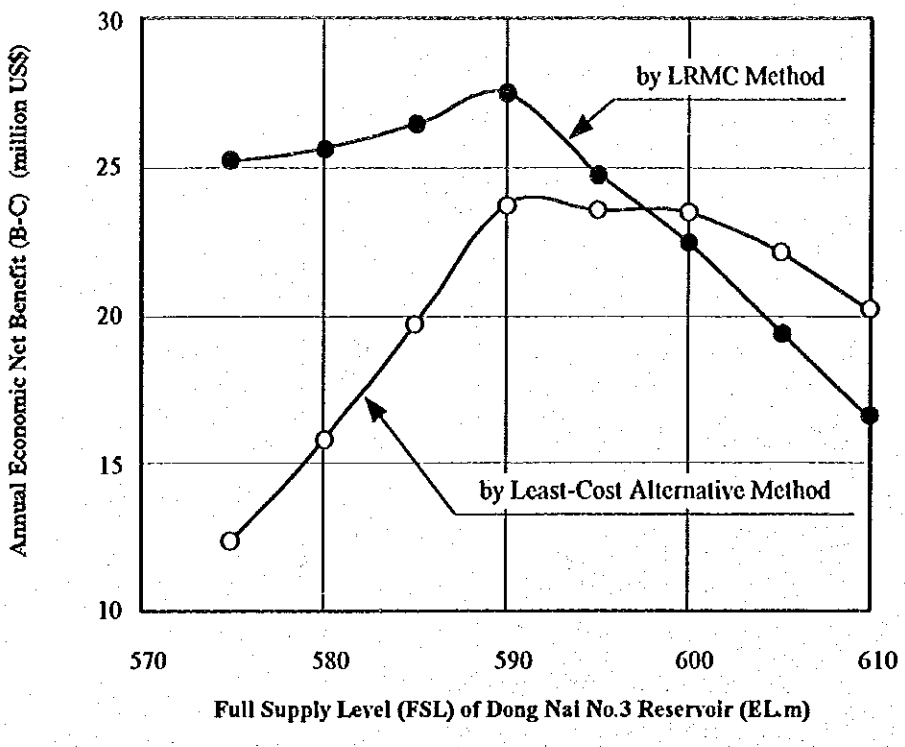
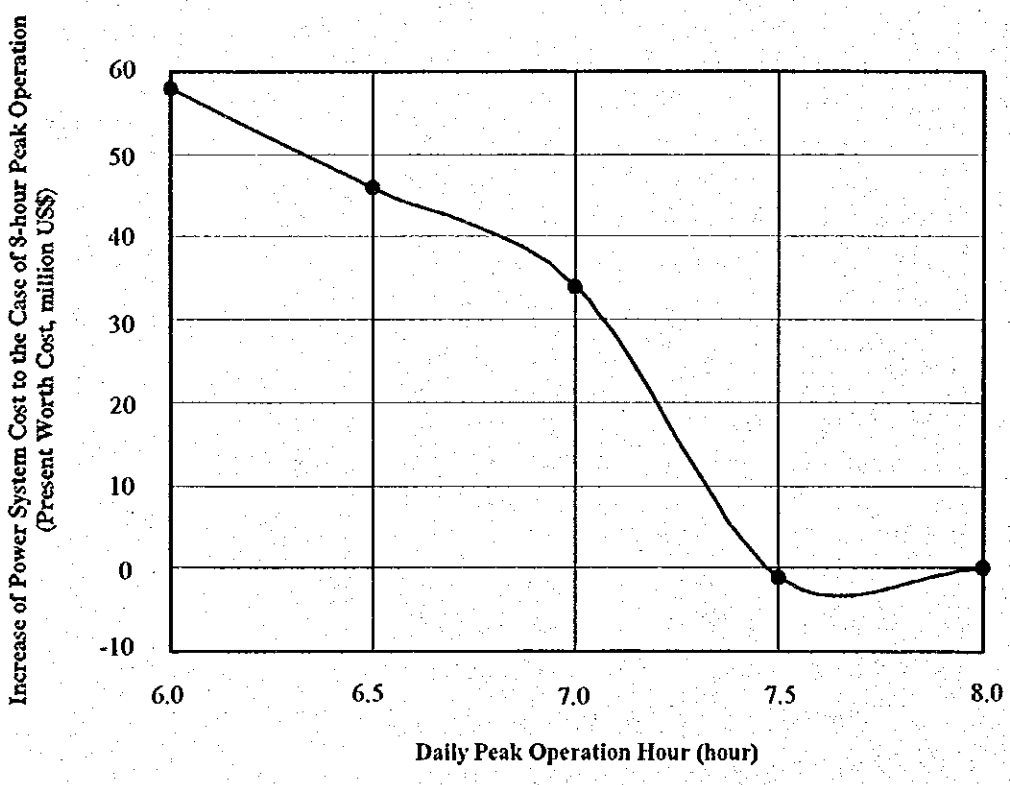


図 S.15　5 種類のプロジェクトレイアウト案



Optimazation of Full Supply Level (FSL) of Dong Nai No.3 Reservoir



Optimazation of Daily Minimum Operation Hour

図 S.16 開発規模の最適化検討結果