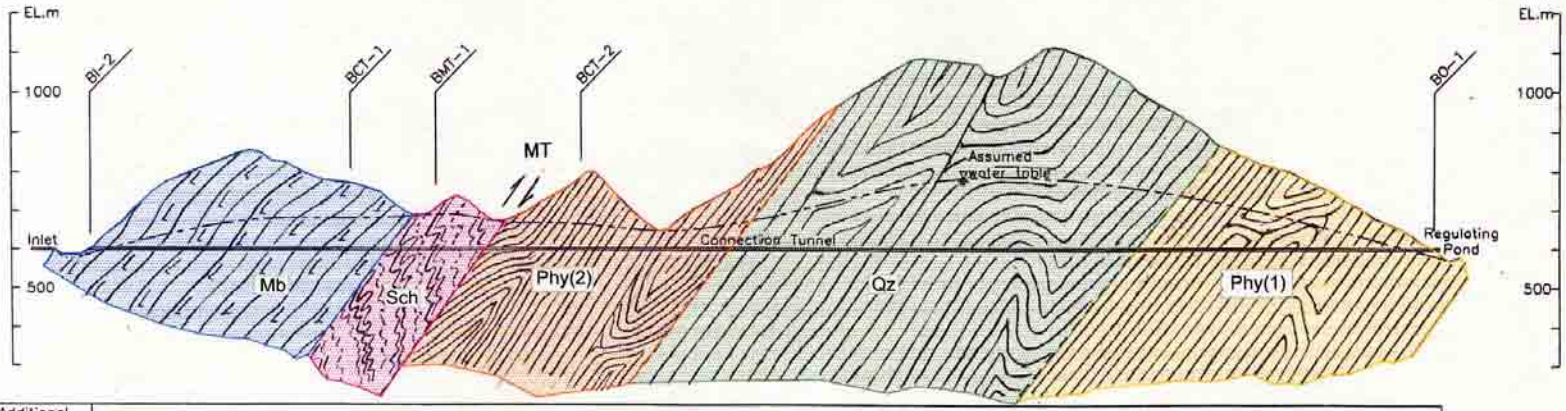
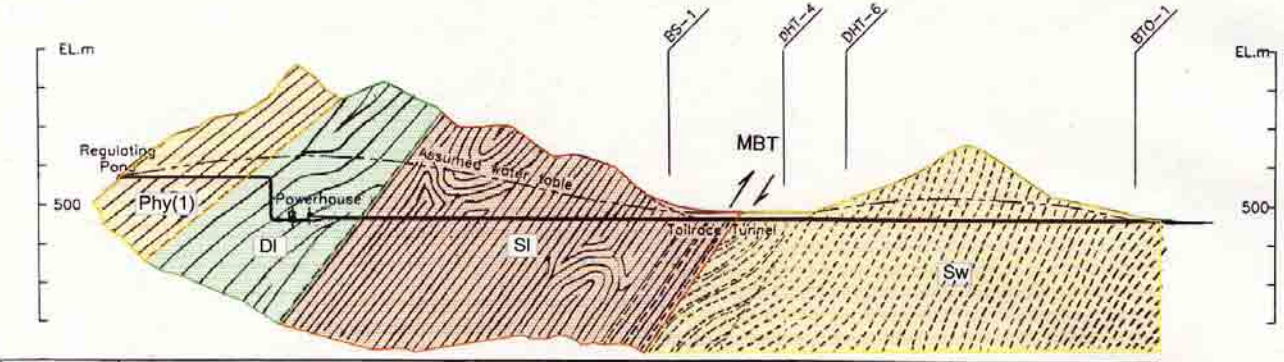


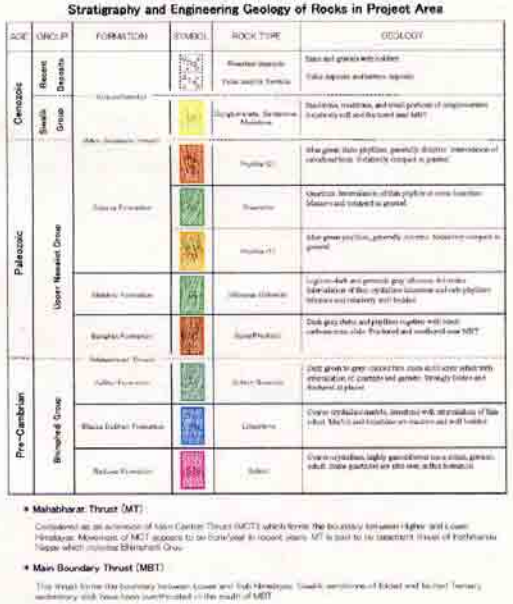
Additional Distance (m)	500	1000	1500	2000	2500	3000
Rock Grade (interval)	Q2 (685) / Q4 (60)	Q3 (205) / Q5 (75)	Q3 (590) / Q4 (80)	Q2 (1000) / Q4 (80)	Q3 (705)	
Geology	Marble	Schist	Phyllite / Quartzitic Phyllite	Quarzite	Phyllite	
Groundwater	Medium		Large	Large – Medium	Medium	

(Inlet To Regulating Pond)



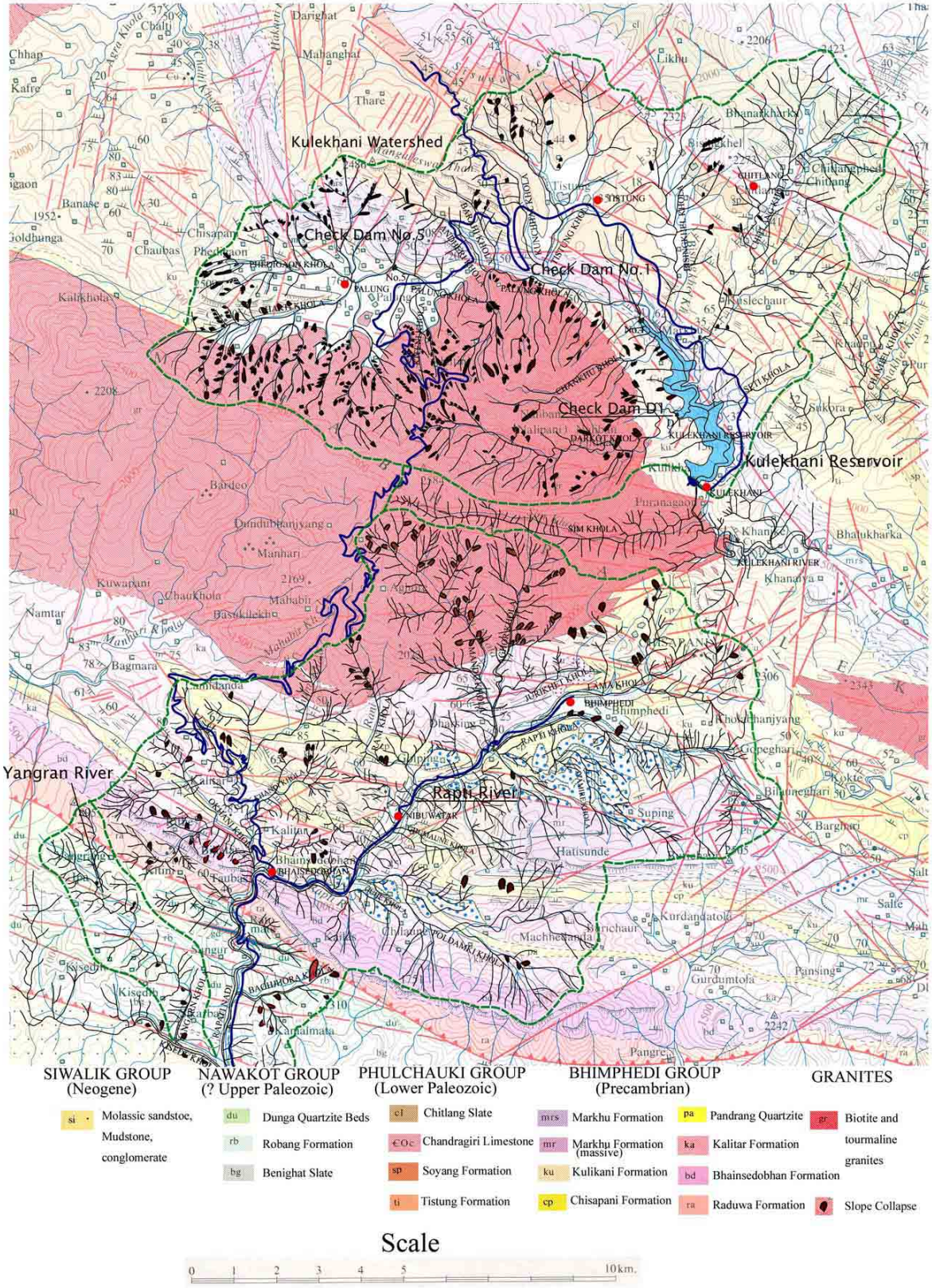
Additional Distance (m)	500	1000	1500	2000	2500
Rock Grade (interval)	Q3 (315) / Q4 (20)	Q2 (265) / Q5 (25) / Q4 (225)	Q3 (250)	Q4 (320) / Q5 (280)	Q3 (1000)
Geology	Phyllite	Dolomite	Slate		Sandstone
Groundwater	Medium	Large			Medium

(Regulating Pond To Tailrace)

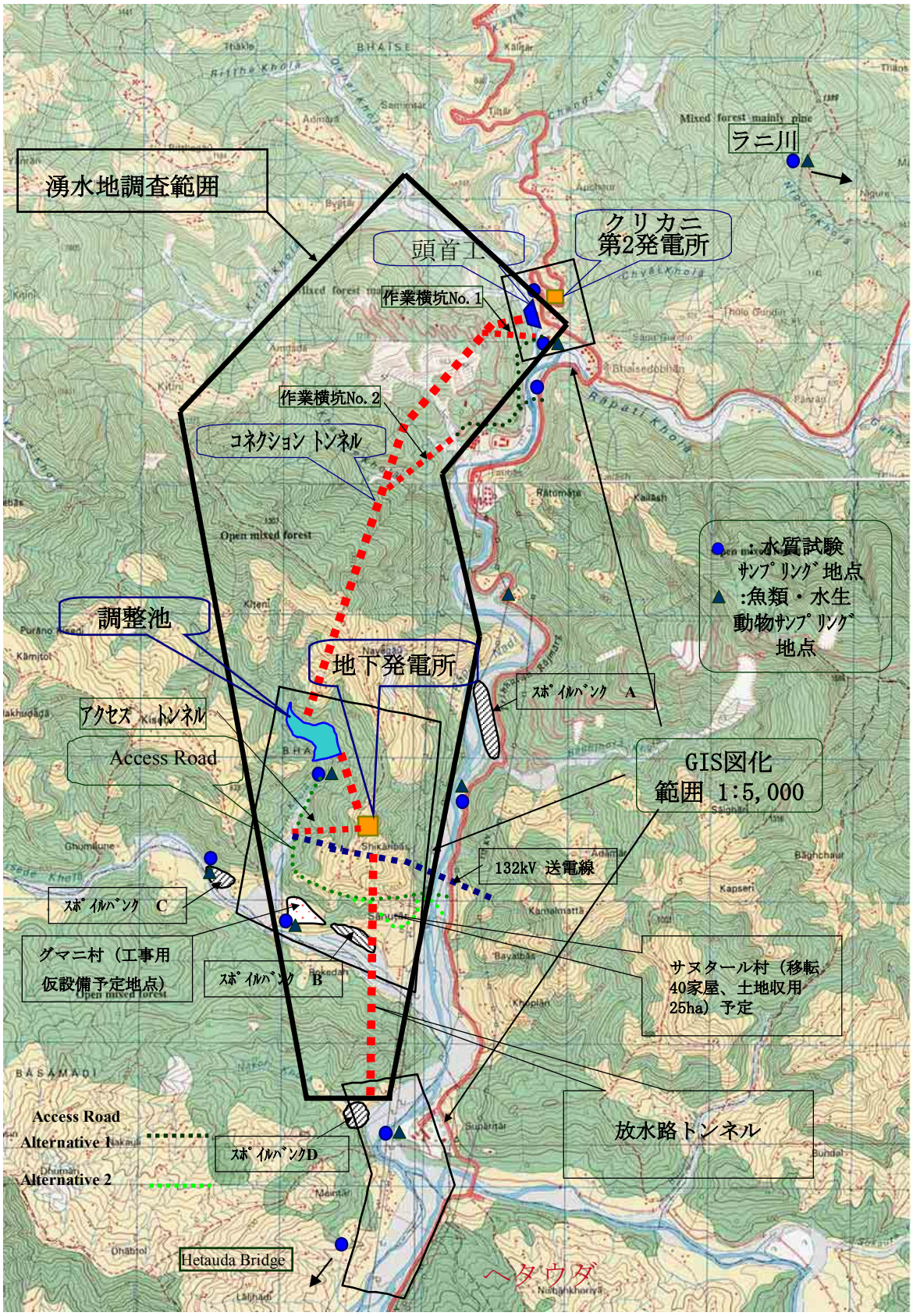


S-F-4

THE UPGRADING FEASIBILITY STUDY ON THE DEVELOPMENT OF THE KULEKHANI III HYDROPOWER PROJECT IN THE KINGDOM OF NEPAL	図 S.3 b) プロジェクト地域の地質 (地質縦断図)
JAPAN INTERNATIONAL COOPERATION AGENCY	



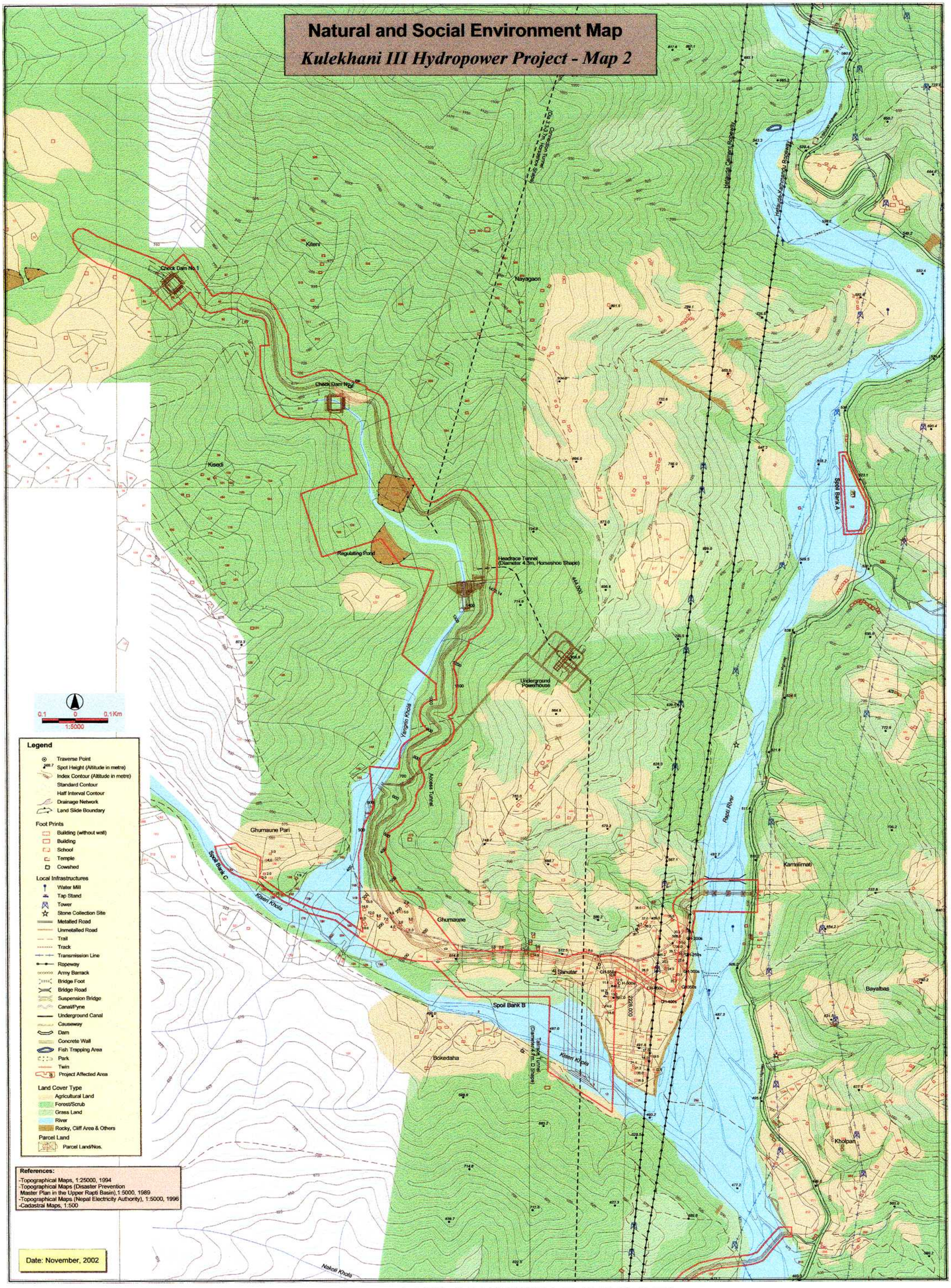
図S. 4　計画地域の地質と斜面崩壊



図S.5 補足環境影響調査範囲

Natural and Social Environment Map

Kulekhani III Hydropower Project - Map 2



Legend

- Traverse Point
- Spot Height (Altitude in metre)
- Index Contour (Altitude in metre)
- Standard Contour
- Half Interval Contour
- Drainage Network
- Land Slide Boundary

Foot Prints

- Building (without wall)
- Building
- School
- Temple
- Cowshed

Local Infrastructures

- Water Mill
- Tap Stand
- Tower
- Stone Collection Site
- Metalled Road
- Unmetalled Road
- Trail
- Track
- Transmission Line
- Ropeway
- Army Barrack
- Bridge Foot
- Bridge Road
- Suspension Bridge
- Canal/Pyne
- Underground Canal
- Causeway
- Dam
- Concrete Wall
- Fish Trapping Area
- Park
- Twin
- Project Affected Area

Land Cover Type

- Agricultural Land
- Forest/Scrub
- Grass Land
- River
- Rocky, Cliff Area & Others

Parcel Land

- Parcel Land/Nos.

References:

-Topographical Maps, 1:25000, 1994
-Topographical Maps (Disaster Prevention Master Plan in the Upper Rapti Basin),1:5000, 1989
-Topographical Maps (Nepal Electricity Authority), 1:5000, 1996
-Cadastral Maps, 1:500

Date: November, 2002

図S.6 自然社会環境影響地図(GIS地形図)

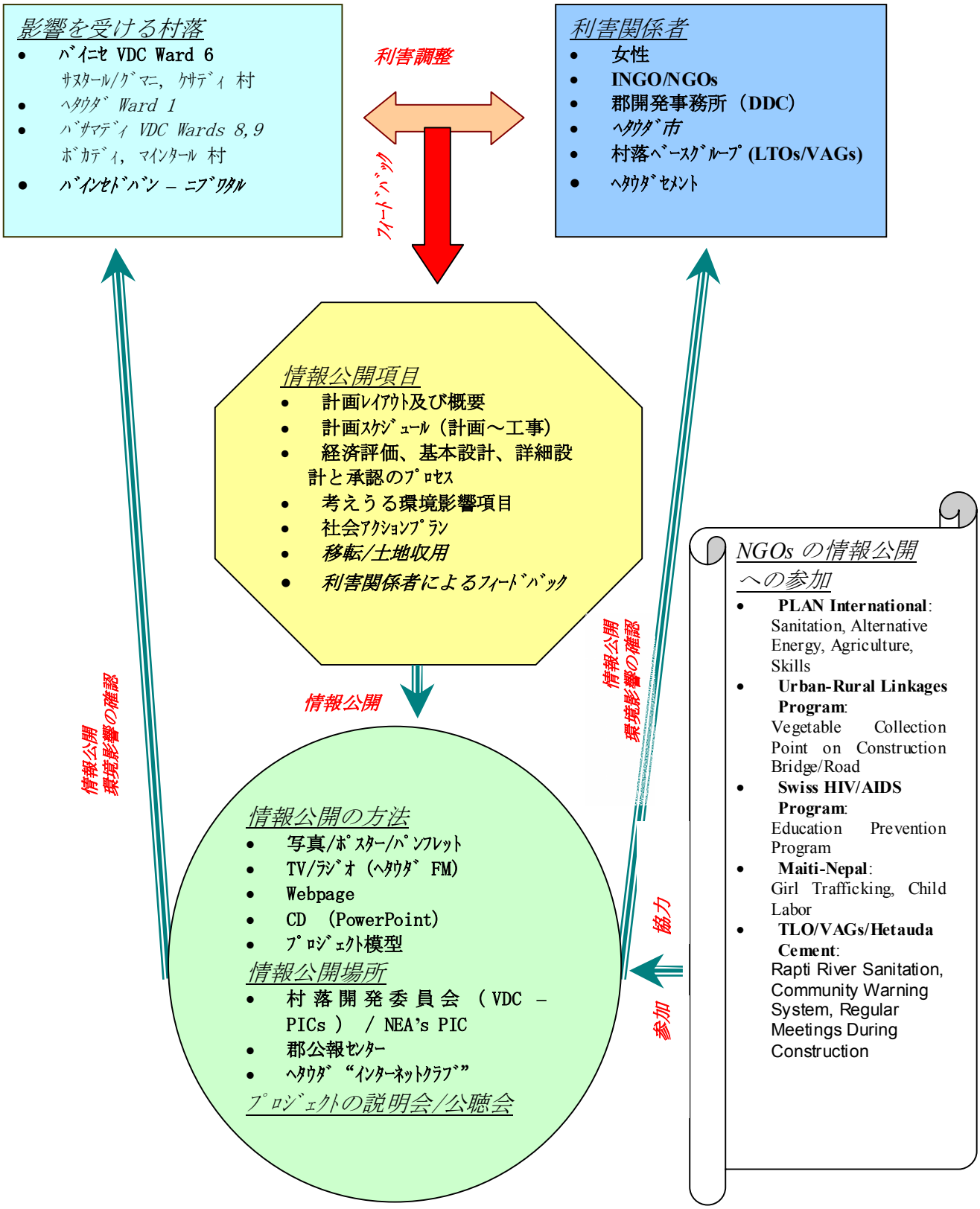
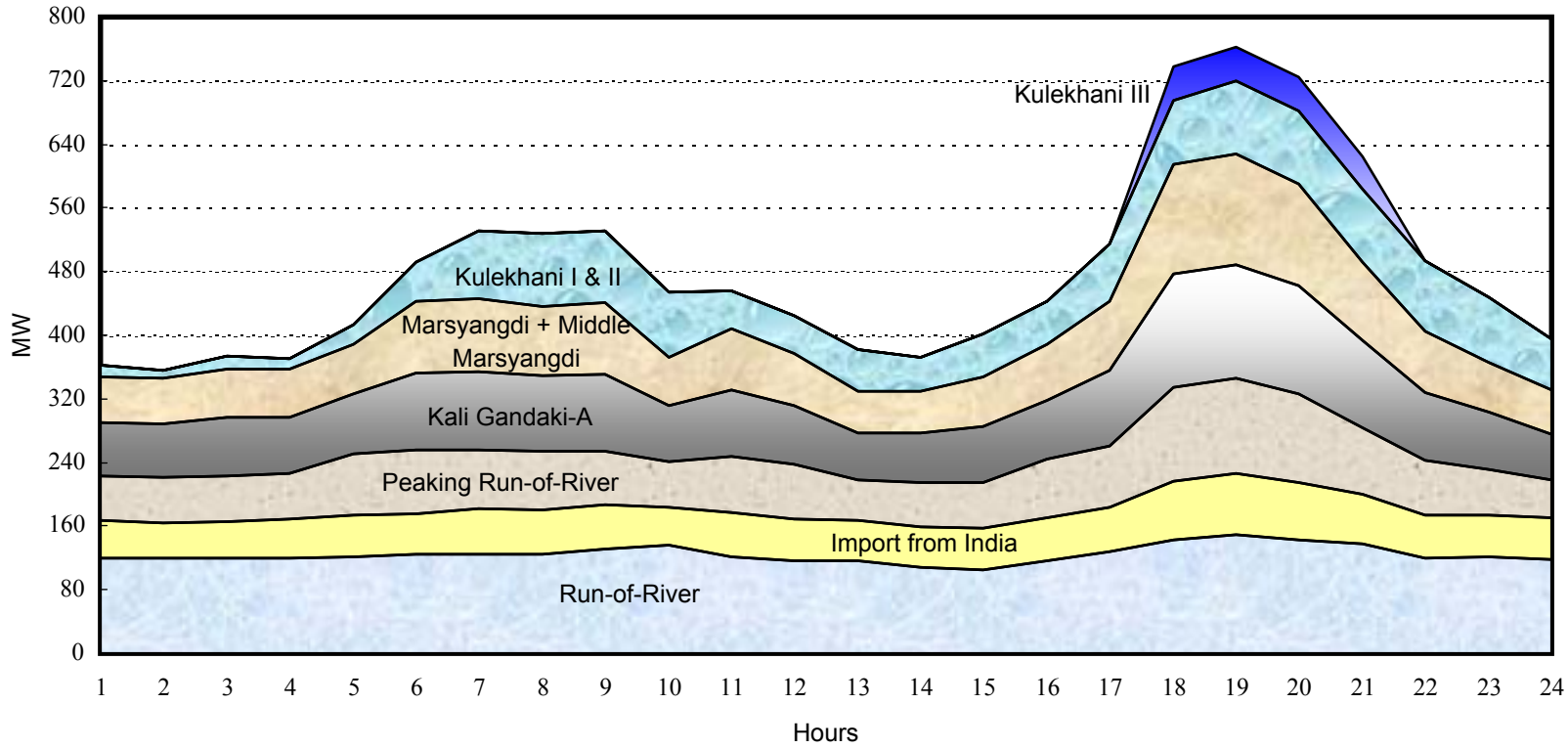
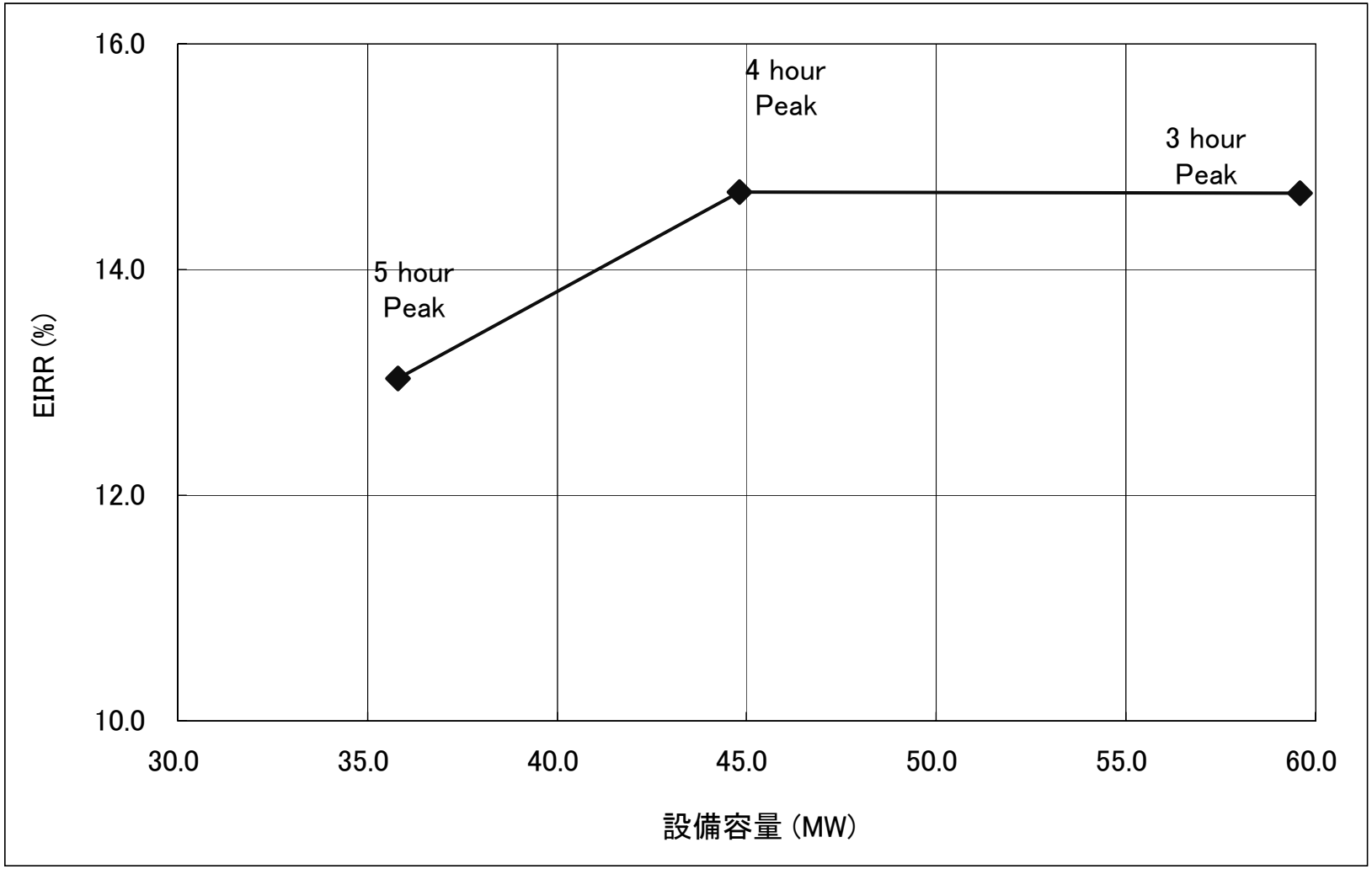


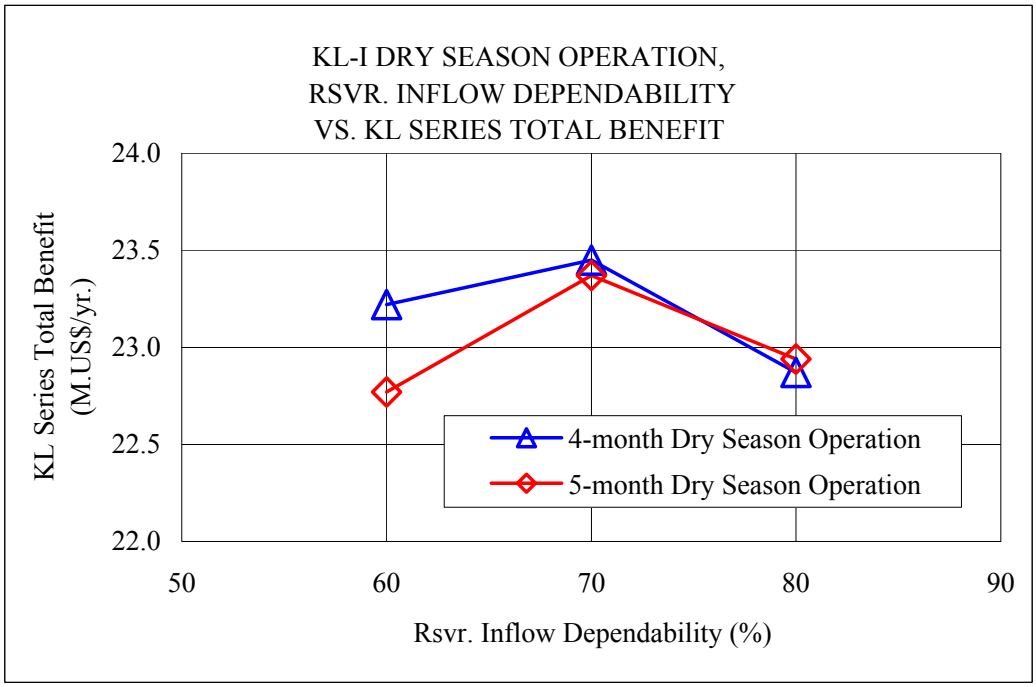
図 S.7 情報公開システム(案)

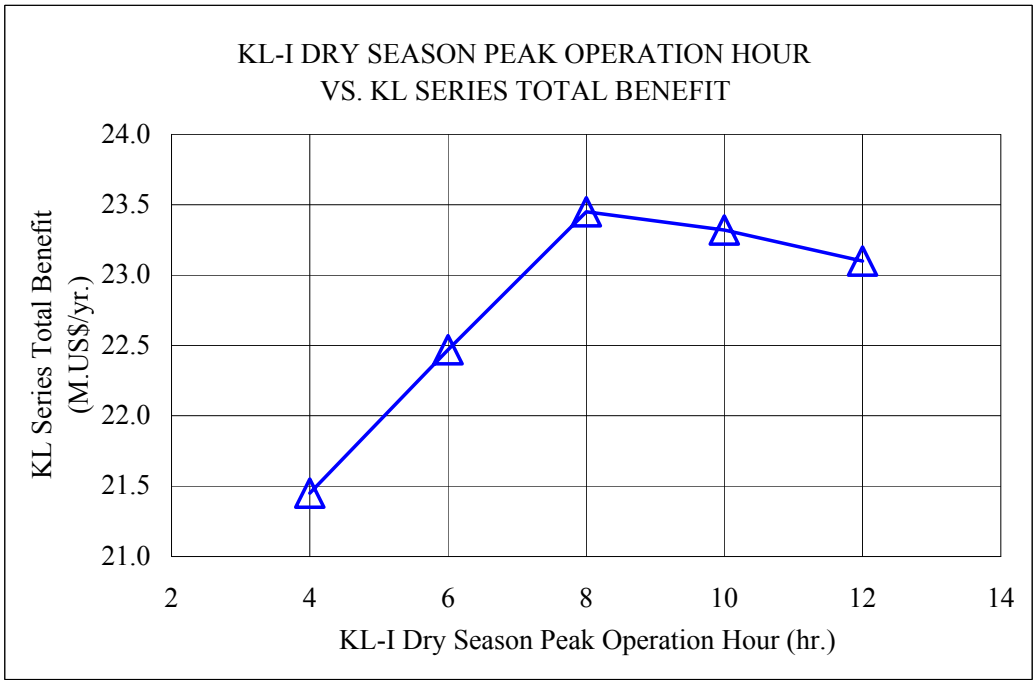


図S.８　FY2008年の日負荷曲線と各発電所負担


16.0
14.0
12.0
10.0
EIRR (%)
4 hour
Peak
3 hour
Peak
5 hour
Peak
30.0
35.0
40.0
45.0
50.0
55.0
60.0
設備容量 (MW)

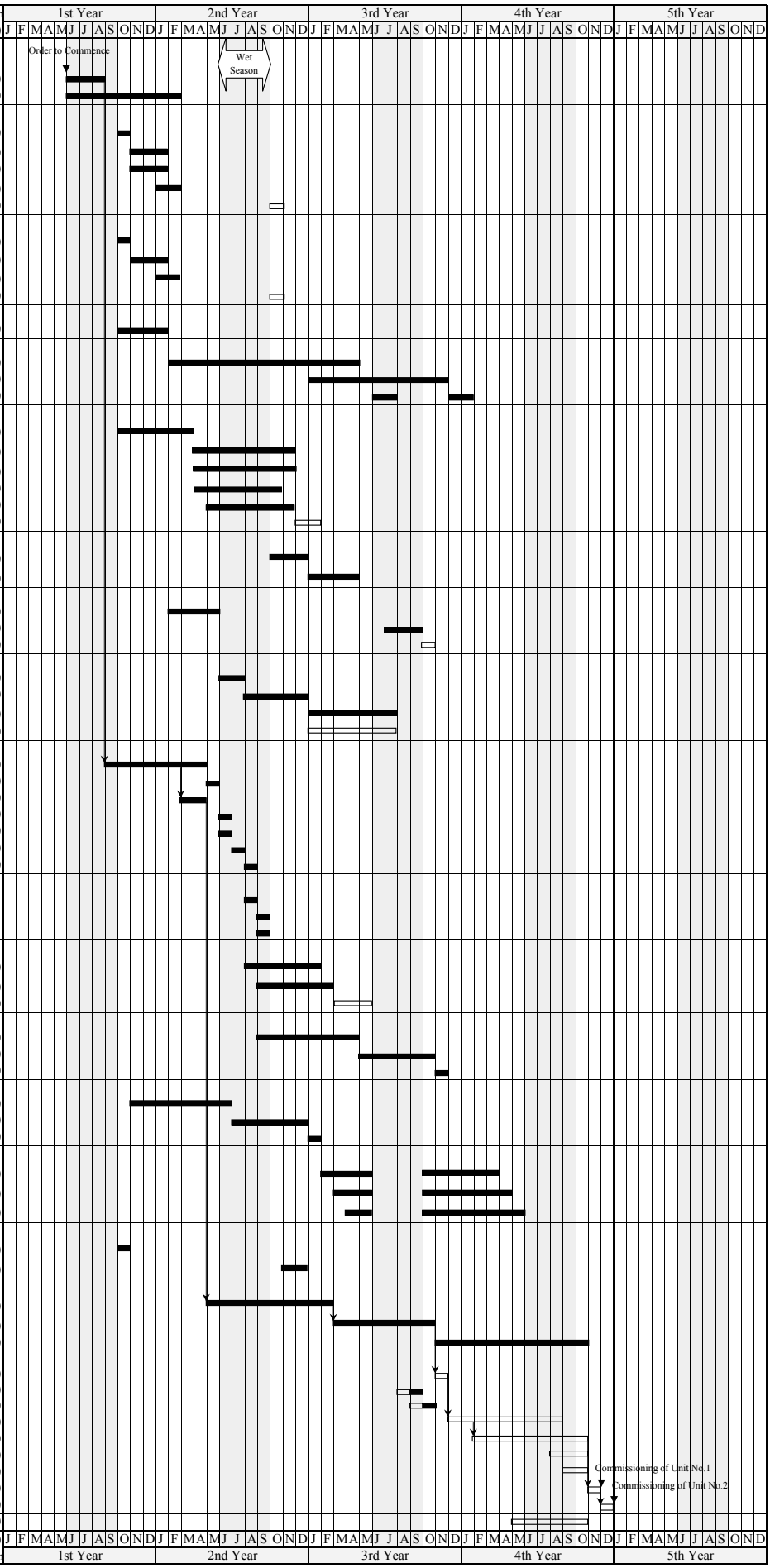
図S. 9　開発規模の比較





図S.10　最適貯水池運用方法

Work Item	Work Quantity	Duration (month)
Preparatory Works		
Mobilization		3.0
Access Road and Bridge		9.0
Khani Headwork		
Open Excavation	5,500 m^3	1.0
Structural Concrete	2,600 m^3	3.0
Precast Concrete Hume Pipe	310 m	3.0
Backfill	3,000 m^3	2.0
Metal Work		1.0
Syphone Structure		
Open Excavation	44,400 m^3	1.0
Structural Concrete	4,900 m^3	3.0
Backfill	29,800 m^3	2.0
Metal Work		1.0
Work Adit		
Tunnel Excavation	500 m	4.0
Connection Tunnel		
Tunnel Excavation	3,475 m	15.0
Tunnel Lining Concrete	3,475 m	11.0
Invert Concrete	3,475 m	4.0
Regulating Dam		
Open Excavation	78,000 m^3	6.0
Mass Concrete (RCC)	69,000 m^3	8.0
Structural Concrete	7,000 m^3	8.0
Consolidation Grout		7.0
Curtain Grout		7.0
Metal Work		2.0
Check Dam		
Open Excavation	33,600 m^3	3.0
Structural Concrete	16,200 m^3	4.0
HeadraceTunnel		
Tunnel Excavation	375 m	4.0
Tunnel Lining Concrete	375 m	3.0
Metal Work		1.0
Penstock Tunnel		
Tunnel Excavation	73 m	2.0
Shaft Tunnel Excavation	108 m	5.0
Backfill Concrete	2,100 m^3	7.0
Pipe Installation	185 m	7.0
Access Tunnel and Work Tunnel		
Tunnel Excavation	800 m	8.0
Invert Concrete	800 m	1.0
P/H top Adit	220 m	2.0
Penstock Adit	60 m	1.0
P/H bottom Adit	60 m	1.0
Tailrace Chamber Adit	100 m	1.0
Tailrace Tunnel Adit	120 m	1.0
Draft Tunnel		
Tunnel Excavation	35 x 2 m	
Tunnel Lining Concrete	35 x 2 m	
Invert Concrete	35 x 2 m	
Tailrace Chamber		
Cavern Excvation	4,500 m^3	6.0
Structural Concrete	1,700 m^3	6.0
Metal Work		3.0
Tailrace Tunnel (Upper Section)		
Tunnel Excavation	814 m	8.0
Tunnel Lining Concrete	814 m	6.0
Invert Concrete	814 m	1.0
Tailrace Tunnel (Lower Section)		
Tunnel Excavation	845 m	8.0
Tunnel Lining Concrete	845 m	6.0
Invert Concrete	845 m	1.0
Tailrace Culvert		
Open Excavation	545,000 m^3	10.0
Structural Concrete	6,700 m^3	10.0
Backfill	490,000 m^3	10.0
Tailrace Outlet		
Open Excavation	7,700 m^3	1.0
Structural Concrete	900 m^3	2.0
Powerhouse		
Cavern Excvation	37,000 m^3	10.0
Structural Concrete	9,000 m^3	8.0
Architectural Works		12.0
Generating Equipment		
OHT Crane	1 Unit	1.0
Draft Tube (No.1)	1 Unit	2.0
Draft Tube (No.2)	1 Unit	2.0
Turbine Generator (No. 1)	1 Unit	9.0
Turbine Generator (No. 2)	1 Unit	9.0
Dry Test (No.1)		3.0
Dry Test (No.2)		2.0
Wet Test (No.1)		1.0
Wet Test (No.2)		1.0
Transmission Line (132 kV)	1.6 km	6.0



(month) Work Item Work Quantity Duration

図S.11　クリカニ第3水力発電所開発計画調査 工事工程