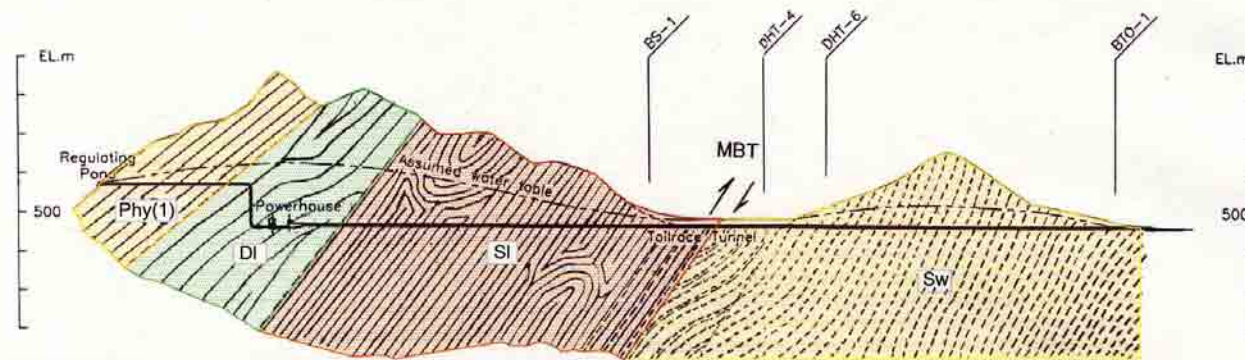


Additional Distance (m)	500					1000					1500					2000					2500					3000																			
Rock Grade (interval)	Q2 (685)					Q4 (60)					Q3 (205)					Q5 (75)					Q3 (590)					Q4 (80)					Q2 (1000)					Q4 (80)					Q3 (705)				
Geology	Marble					Schist					Phyllite/Quartzitic Phyllite					Quartzite					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 (24)					Q2 (265)					Q5 (24)					Q4 (225)					Q3 (250)					Q4 (320)					Q5 (280)					Q3 (1000)				
Geology	Phyllite					Dolomite					Slate					Sandstone																													
Groundwater	Medium					Large					Medium																																		

(Regulating Pond To Tailrace)

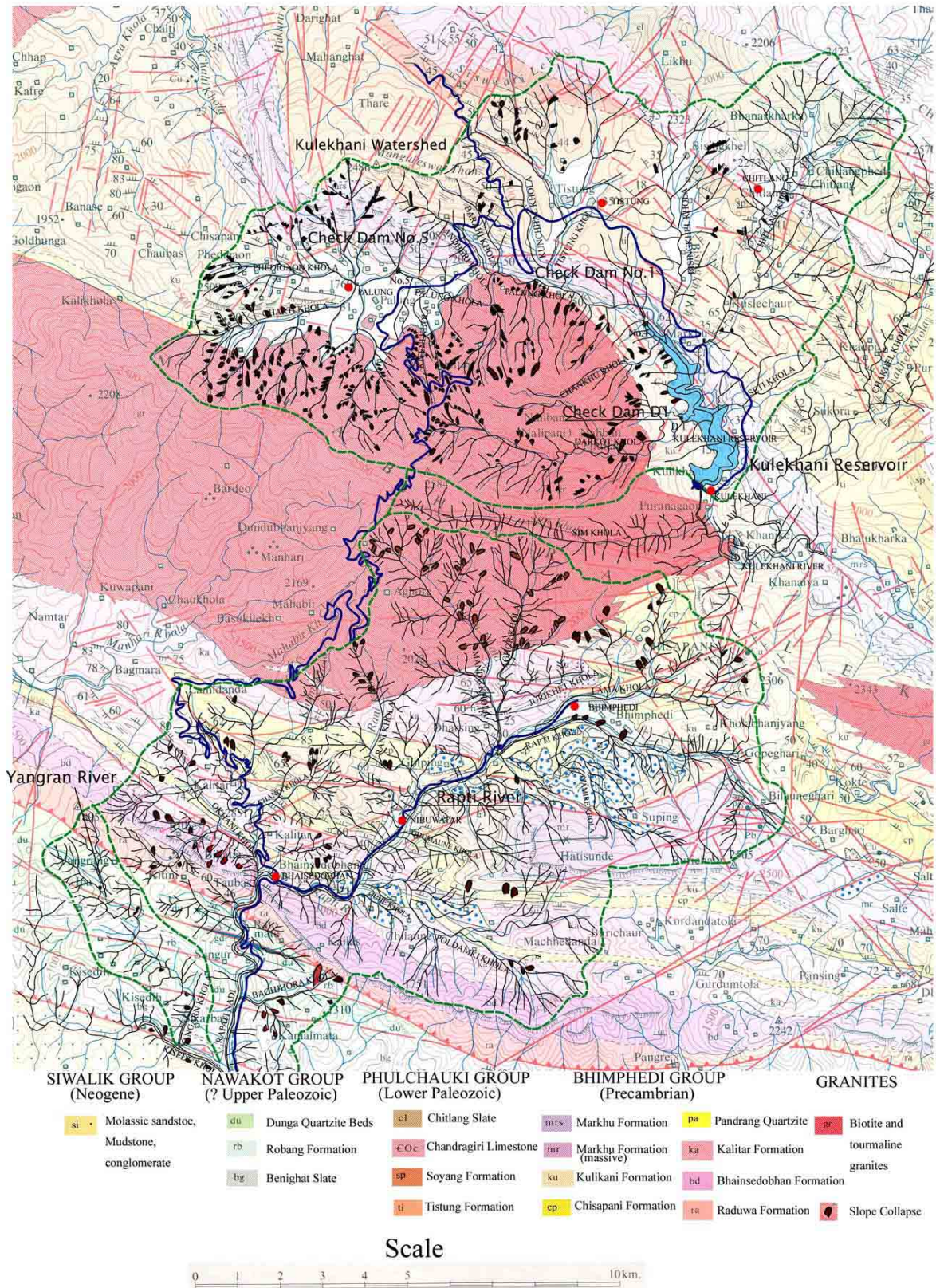
Stratigraphy and Engineering Geology of Rocks in Project Area

AGE	GROUP	FORMATION	SYMBOL	ROCK TYPE	GEOLOGY
Cenozoic	Recent Deposits	Fluvial deposits	[Symbol]	Fluvial deposits	Thin and granular interbedded
		Fill deposits	[Symbol]	Fill deposits	Thin and granular interbedded
Palaeozoic	Upper Neuvast Zone	Shale (S1)	[Symbol]	Shale	Dark grey to black phyllite, generally dip-slip, interbedded with sandstone and siltstone
		Sandstone (S2)	[Symbol]	Sandstone	Light to dark grey to black, generally dip-slip, interbedded with shale and siltstone
		Siltstone (S3)	[Symbol]	Siltstone	Dark grey to black, generally dip-slip, interbedded with shale and sandstone
		Shale (S4)	[Symbol]	Shale	Dark grey to black, generally dip-slip, interbedded with sandstone and siltstone
Pre-Cambrian	Bhujang Group	Shale (B1)	[Symbol]	Shale	Dark grey to black, generally dip-slip, interbedded with sandstone and siltstone
		Sandstone (B2)	[Symbol]	Sandstone	Light to dark grey to black, generally dip-slip, interbedded with shale and siltstone
		Siltstone (B3)	[Symbol]	Siltstone	Dark grey to black, generally dip-slip, interbedded with shale and sandstone
		Shale (B4)	[Symbol]	Shale	Dark grey to black, generally dip-slip, interbedded with sandstone and siltstone

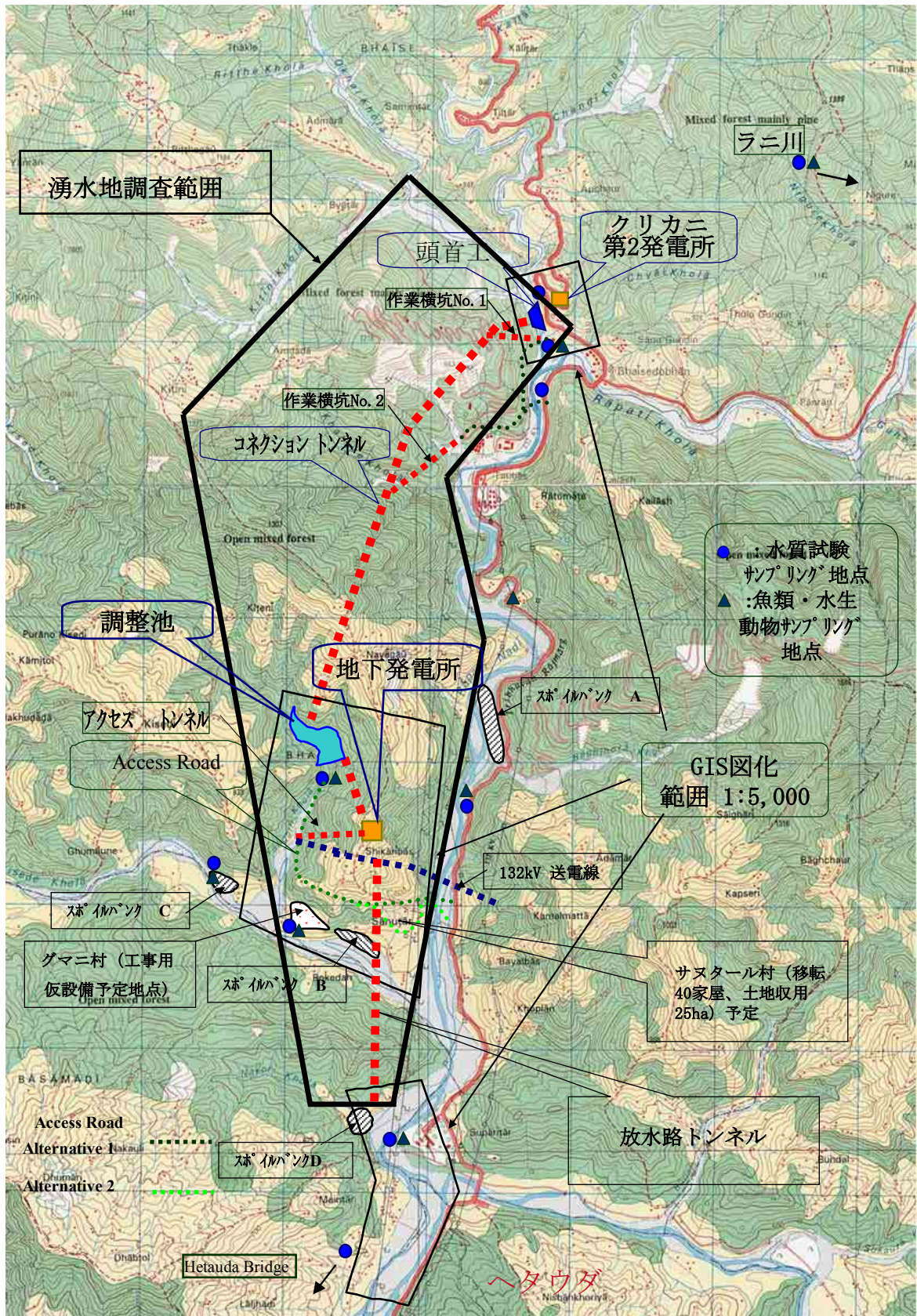
• Mahabharat Thrust (MT)
 Considered as an extension of Main Boundary Thrust (MBT) which forms the boundary between Higher and Lower Himalayas. Movement of MBT appears to be towards the north-west. MT is said to be a normal thrust of Palaeozoic Tertiary which initiated in Himalayas Group.

• Main Boundary Thrust (MBT)
 This thrust forms the boundary between Lower and Sub-Himalayas. South-westward of MBT and north of Terai, secondary strike-slip faults are distributed in the south of MBT.





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

图S.6 自然社会环境影响地图(GIS地形图)

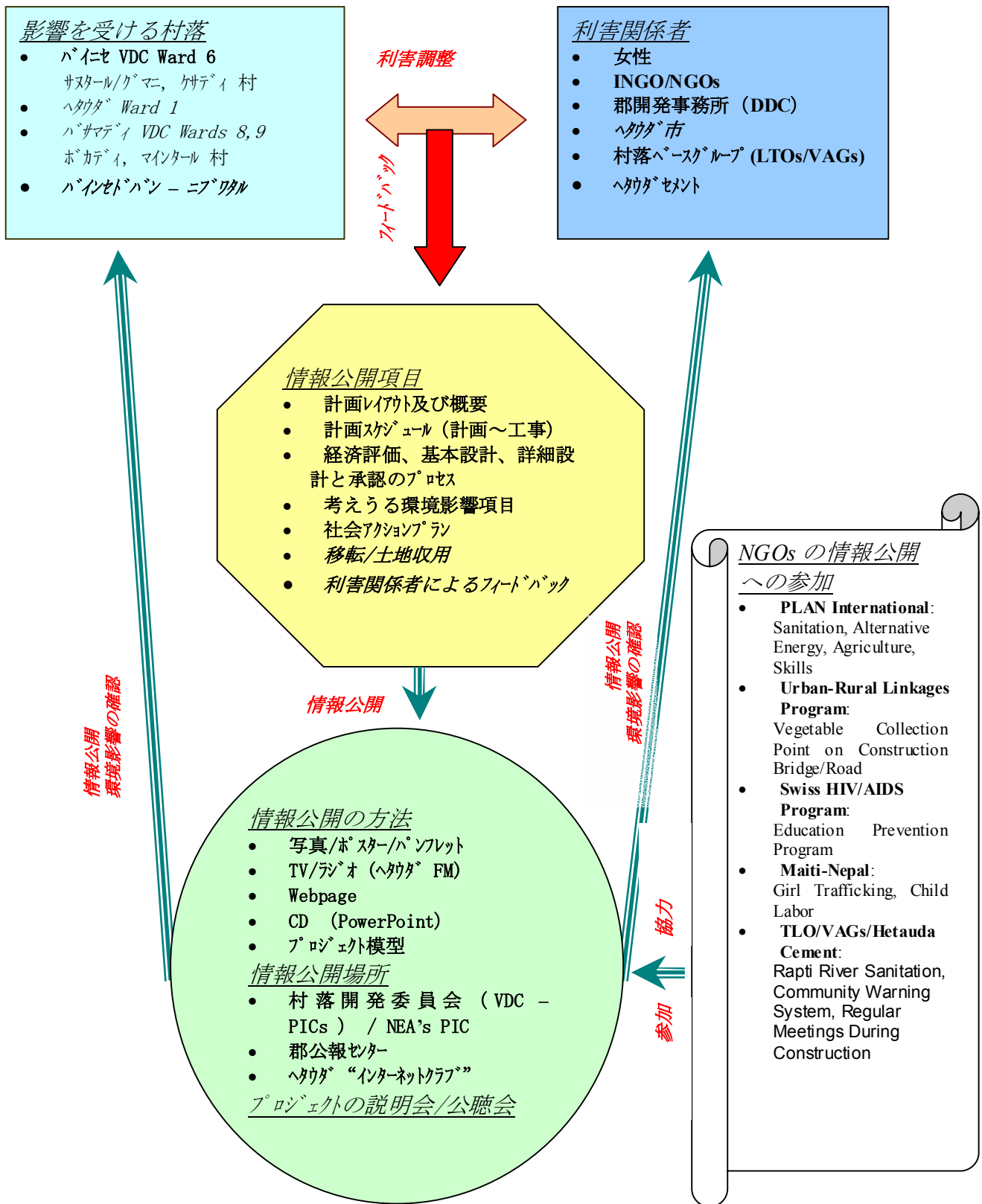
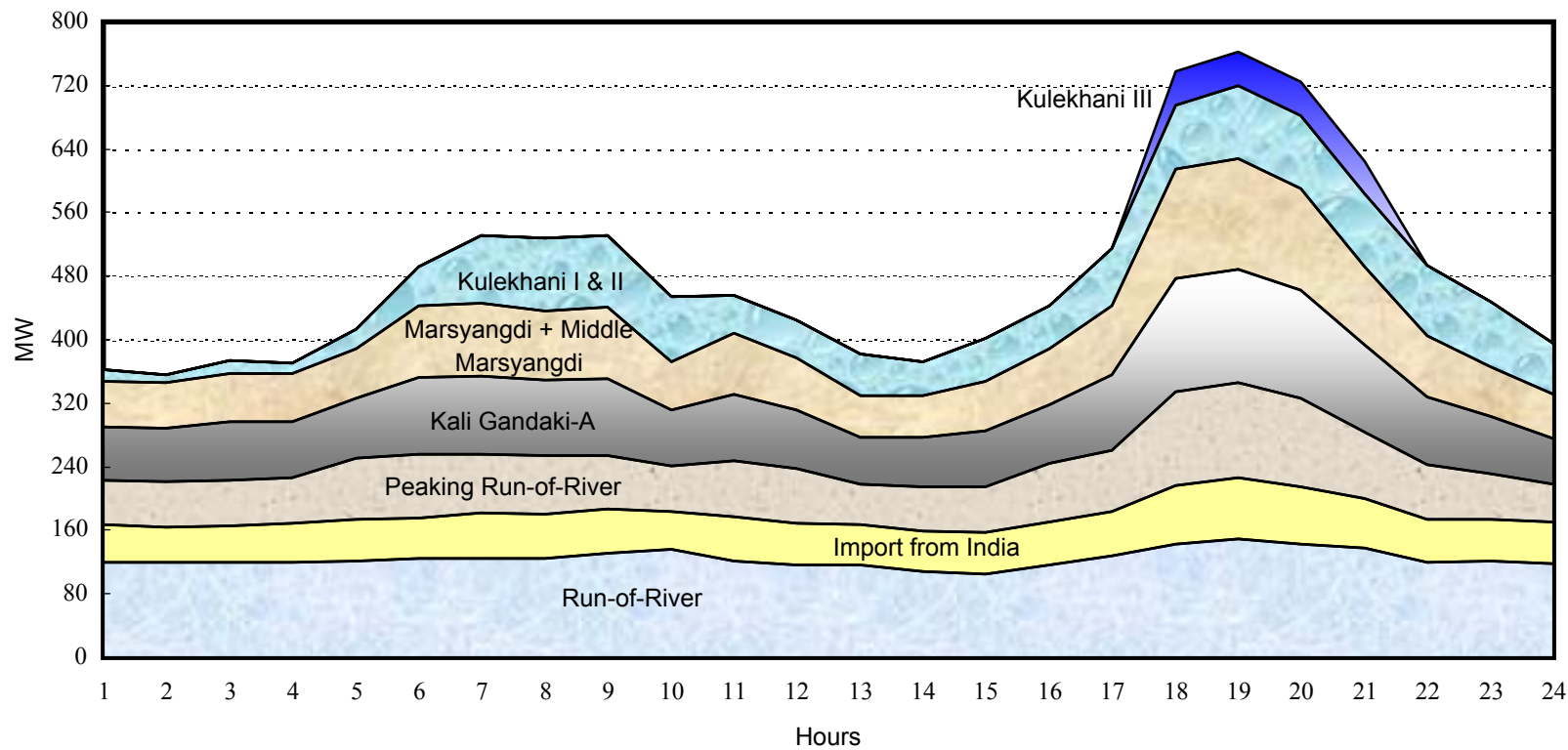


図 S.7 情報公開システム(案)

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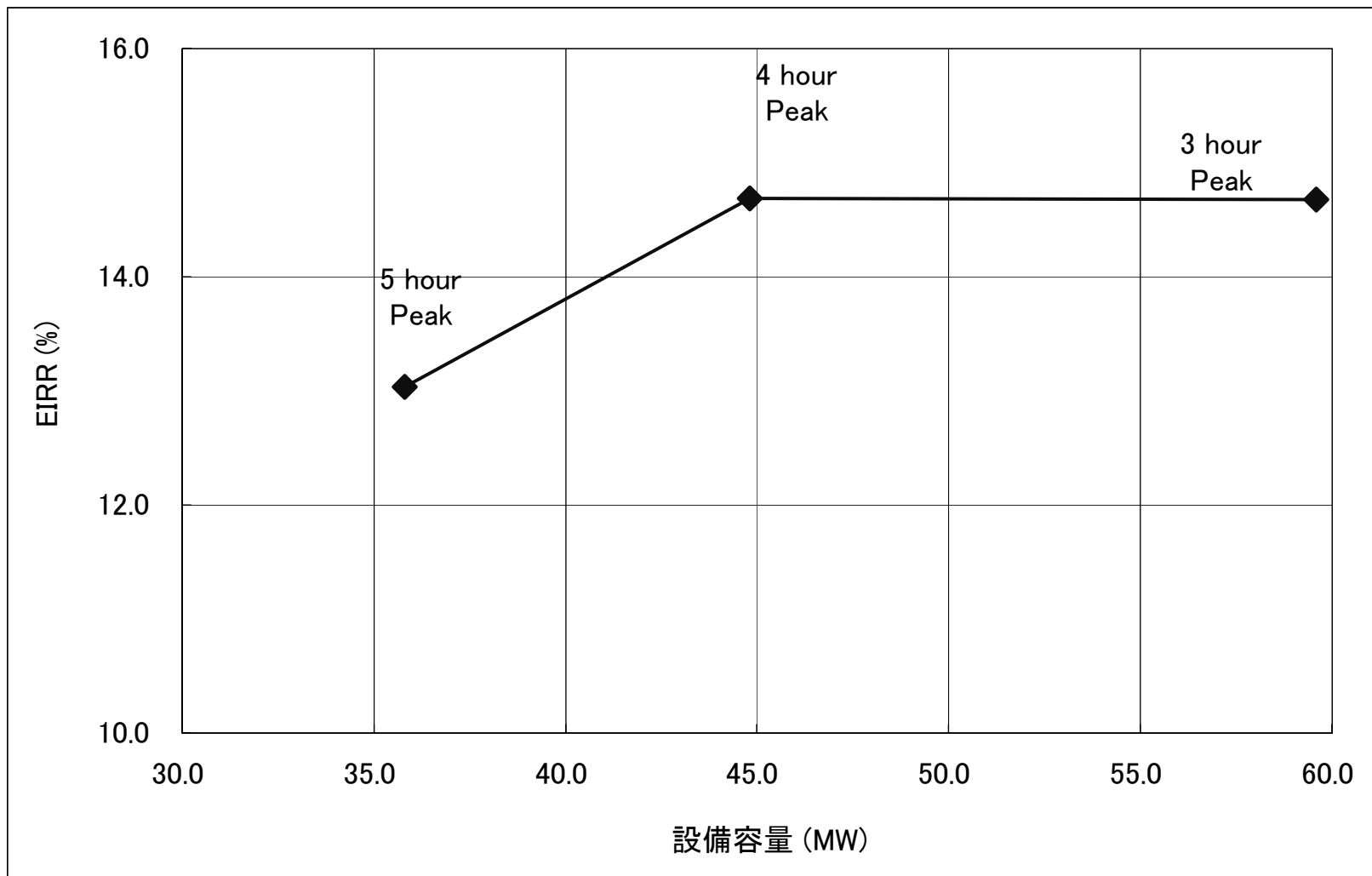
Peak Load Sharing in FY2008

Forecasted Peak load: 762.3 MW

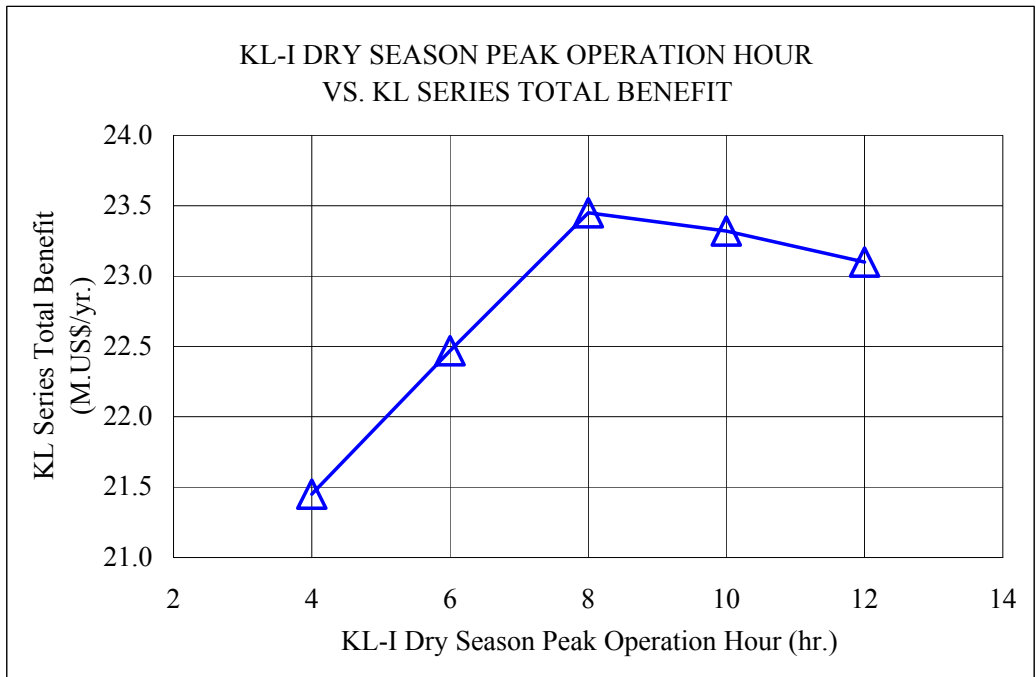
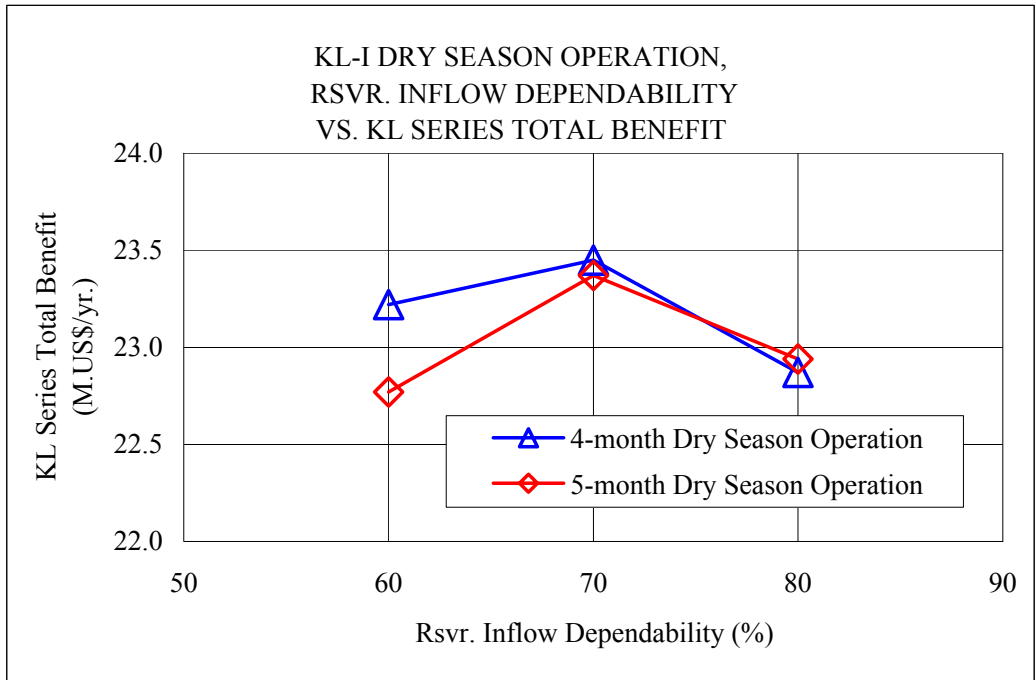


図S.8 FY2008年の日負荷曲線と各発電所負担

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図S.9 開発規模の比較



图S.10 最適貯水池運用方法

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

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図S.11 クリカニ第3水力発電所開発計画調査 工事工程