Sanima Hydro & Engineering (P.) Ltd.

Sanima Hydro & Engineering Private Limited (SHEPL) has been providing quality consulting services in the hydropower sector over the past 10 years, both at national as well as international levels. Our achievements in the hydropower sector range from design and successful development of three in-house hydropower projects (2.5 MW, 7 MW and 22 MW) to consulting services for external clients such as hydropower companies, financial institutions and multi-national organisation.

In the year 2013, we attained ISO 9001:2008 certification by demonstrating the ability to consistently provide services and products that met customer satisfaction, international best practice standards as well as statutory and regulatory requirements. This year, we have established a close association with a hydropower engineering company in the United Kingdom "Hydroplan" to further strengthen our international and national network. "Hydroplan" has become a significant shareholder in SHEPL and with this partnership we expect to be more efficient and provide even higher quality services to our clients.

We provide the following engineering, planning and consulting services in the hydropower sector which are tailored to the needs of our clients:

- Feasibility Studies
  - Topographical Survey & Mapping
  - Surface Geological Mapping
  - Hydrology Study
  - Economic Analysis
- Project Appraisal
- Due Diligence Study
- Environment Impact Assessment & Environment Management Plan
- Detailed Engineering Design
- Hydraulic & Structural Design
- Preparation of Contract Packages & Tender Documents
- Project Planning, Construction Management & Site Supervision
- Construction Monitoring & Bill Verification

Our human resources currently comprise 60 staffs including 40 specialized technical professionals many of whom have graduate degrees from Europe and North America.

OUR IN-HOUSE PROJECTS

1 SUNKOSHI SMALL HYDROPOWER PLANT (2.5 MW)

Location:	Sunkoshi River, Sindhupalchowk District
Installed Capacity:	2.5 MW
Design Discharge:	2.7 m^3/s
Gross Head:	124.5 m
Headworks:	Low height boulder lined, Diversion Weir, Side Orifice Intake, Gravel Trap, Settling Basin
Penstock Pipe:	2.6 km long
Powerhouse:	Surface
Turbine:	Two units with Turgo Turbines (2 X 1250 kW)
Commercial Operation:	March, 2005

2 MAI HYDROPOWER PLANT (22 MW)

Location:	Danabari and Chisapani VDC, Ilam District, Eastern Development Region of Nepal
Catchment Area:	589.0 km^2
Design Discharge:	23.40 m^3/s (40% exceedance flow)
Gross Head:	121.6 m
Diversion Dam:	Free flow concrete gravity dam
Intake:	Frontal Intake, RCC open canal
Settling Basin:	Surface (Four Chambered)
Headrace Culvert:	RCC Pressurized Culvert,1080 m long
Headrace Tunnel:	Inverted D,2.2 km length
Surge Shaft:	Cylindrical/Vertical
Powerhouse:	Semi – Surface
Turbine:	Three units with Vertical Francis Turbines (3 X 7500 kW)
Commercial Operation:	February, 2015

3 MAI CASCADE HYDROPOWER PROJECT (7 MW)

Location:	Danabari VDC, Ilam District, Eastern Development Region of Nepal
Catchment Area:	589.0 km^2
Design Discharge:	23.40 m^3/s (40% exceedance flow)
Gross Head:	42.65 m
Diversion Structure:	Canal Diversion (MHP tailrace to cascade)
Type of Canal:	Trapezoidal canal and rectangular culvert
Crossing Structure:	Bridge crossing and hume pipe crossing
Forebay:	Surface
Powerhouse:	Surface
Turbine:	Three units with Horizontal Francis Turbines (3 X 2450 kW)
Commercial Operation:	Expected from July, 2015

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sanima

"Quality Services - Conception to Completion"

Sanima Hydro And Engineering (P.) Ltd.

Hydroplan

ISO 9001 : 2008 Certified Company

"Quality Services - Conception to Completion"

Our Consulting Services

National Projects	67
International Projects	13
Total Projects	80

Note:- Completed ✓
Ongoing ●

National Projects

	SERVICES																		SIZE
	Desk Study	Licensing	Project Planning	General Layout	Survey	Optimization study	Surface Geological Mapping	Feasibility Study	Tender Document Preparation	Detailed Engineering Design	Structural design	Reinforcement detailing	IEE reports/EIA	Progress Monitoring & Bill Verification for Financial Institutions	Due Diligence for Financial Institutions and others	Design of Waterways and Powerhouse	Construction Supervision	General Technical Assistance	SIZE IN MEGA WATTS
Sunkoshi-2 High Dam Project *Asian Development Bank*	✓																	✓	1,110
Upper Tamor Hydropower Project *Tamor Sanima Energy (P.) Ltd.*	✓	✓	✓	✓	✓	✓	✓	✓					✓						415
Middle Tamor Hydropower Project *Tamor Sanima Energy (P.) Ltd.*	✓	✓	✓	✓	✓	✓	✓	✓					✓						75
Middle Trishuli Ganga Hydropower Project *Perfect Energy Development Pvt. Ltd.*				✓	✓	✓	✓	✓					●						65
Lower Likhu Hydropower Project *Swet Ganga Hydropower and Construction (P.) Ltd.*	✓	✓	✓	✓	✓	✓		✓											28.1
Khani Khola-1 hydropower Project *Green Life Energy Pvt. Ltd.*														●					25
Solu Hydroelectric Project *Upper Solu Hydroeletric Company (P.) Ltd.*															✓				23.5
Upper Chaku "A" Hydropower Project *Shiva Shree Hydropower Limited*														●					22.2
Mai Hydropower Project *Sanima Mai Hydropower Limited*	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓						22
Hewa Khola "A" Hydroelectric Project *Panchthar Power (P.) Ltd.*		✓	✓	✓	✓	✓		✓	✓	●	●	●	●				●		14.9
Siprin Khola Hydropower Project *Synergy Power Development (P.) Ltd.*														✓					10
Lower Modi-1 Hydropower Project *Manang Trade Link (P.) Ltd*														✓					10
Upper Mai Hydropower Project *East Nepal Development Endeavour (P.) Ltd.*										✓	✓	✓							10
Iwakhola Small Hydropower Project *Rairang Hydropower Company Limited*										●	●	●							9.9
Mai Cascade Hydropower Project *Sanima Mai Hydropower Limited*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	●	●	✓		✓				7
Junbesi Hydropower Project *Dovan Hydropower (P.) Ltd.*	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓				●	●	5.2
Bhairavkund Small Hydroelectric Project *Nikhil Jalshakti (P.) Ltd.*				✓				✓	✓										3

	SERVICES																		SIZE
	Desk Study	Licensing	Project Planning	General Layout	Survey	Optimization study	Surface Geological Mapping	Feasibility Study	Tender Document Preparation	Detailed Engineering Design	Structural design	Reinforcement detailing	IEE reports/EIA	Progress Monitoring & Bill Verification for Financial Institutions	Due Diligence for Financial Institutions and others	Design of Waterways and Powerhouse	Construction Supervision	General Technical Assistance	SIZE IN MEGA WATTS
Sunkoshi Small Hydropower Plant *Sanima Hydropower (P.) Ltd.*				✓	✓	✓	✓	✓	✓	✓	✓	✓						●	2.5
Pheme Khola Small Hydropower Project *Khoranga Khola Hydropower Development Co (P.) Ltd.*								✓		✓	✓	✓					✓		0.999
Tinekhu Khola Small Hydropower Project *Hydro Innovation (P.) Ltd.*		✓	✓					✓											0.99

International Projects

Faizabad Small Hydropower Plant, Afghanistan *INTEGRATION Environment and Energy (GmbH)*										✓									4.5
North Mathioya Small Hydropower Project, Kenya *Graeme Watson Associates (GWA)*										✓									3
Kipchoria Small Hydropower Project *Graeme Watson Associates (GWA)*										✓									3
Kipsonoi Kapkoros Small Hydropower Project, Kenya *Graeme Watson Associates (GWA)*									●	✓									4.5
Keshim Small Hydropower, Afghanistan *INTEGRATION Environment and Energy (GmbH)*										✓									3
Tagabi Hydropower Scheme, Kenya *Graeme Watson Associates (GWA)*										✓									1.7
Khanabad Hydropower Station, Afghanistan *INTEGRATION Environment and Energy (GmbH)*											✓								1.8
Dom Xom Hydropower Project *Grenzone (Thailand) Co. Ltd.*										✓									0.04
Topichi Small Hydropower Plant, Afghanistan *INTEGRATION Environment and Energy (GmbH)*										✓									0.5
Uileann Hydro Scheme *Hydroplan, Dorset, UK*											✓	✓							0.8
Wester Allt Beithe Hydro Scheme *Hydroplan, Dorset, UK*											✓	✓							0.5
Easter Allt Beithe Hydro Scheme *Hydroplan, Dorset, UK*											✓	✓							0.5
Tindinyo Falls Small Hydroelectric Project *Asia Pacific Power, People's Republic of China*										✓									