NEPAL

ACTIVITY REPORT 2013

Nepal Tunnelling Association (NTA)
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Nepal Tunnelling Association is a non-profitable organization, created in 2011, with life members and corporate members.

NTA Talk program

- **"Safety in Underground works: Case Histories from Hydropower Projects" by Dibya Raj Pant on 30 March 2012.**
- **"Geological Challenges in Hydropower Development of Nepal" by Subas Sunuwar on 20 April 2012.**
- **"Rock Squeezing Problem in Tunnels of Nepal Himalaya: Prediction and Rock Support Design" by Subas Sunuwar on 28 September 2012.**
- **"Numerical Modelling for Underground Structure" by Dr. Sandip Shah on 2 August 2013**

Training

- **Sprayed concrete (shotcrete) in tunnelling under Himalayan Conditions" on 9-10 December 2011**
- **Tunnel Design, Construction and Risk Management on 11-12 December 2012.**
- **Site Investigation, Design and Construction of Hydro and Transport Tunnel: Basic to Advance on 19-20 December 2013.**

Major hydroelectric projects are under construction and study. Construction works of hydroelectric tunnels are summarised below:

Project	Tunnel length	Size	Completed
Upper Tamakoshi (456 MW)	11.5 km	6m	4.85 km
Chameliya (30 MW)	4 km	5.2 m	0.10 km
Kulekhani III (14 MW)	5.9 km	3.5m	3.31 km
Upper Trisuli 3 'A' (60 MW)	4.1 km	5.8 m	1.17 km
Sanima Mai (22MW)	2.2 km	4m	1.60 km
Upper Mai (9.98MW)	4 km	2m	0.40 km
Hewa Khola (14 MW)	4 km	3.5m	1.90 km
Melamchi Diversion Scheme (Water supply tunnel)	26.3 km	4m	2.00 km
Upper Chakhu (22 MW)	2.3 km	2m	1.37 km
Lower Modi Hydroelectric Project (20MW)	4.5 km	4m	1.05 km
Khani Khola Hydroelectric Project (40MW)	2.28 km	2.5m	0.722 km
Budhi Gandaki Storage (600 MW) test adit	0.678km	2m	0.678km
Rasuwagadhi (111MW) Access tunnel		6m	0.125km
Middle Bhotekoshi (102 MW), Adit		5m	0.30 km
Thapa Khola HEP (12MW) HRT, Mustang	2.2 km	3m	0.2km

Mai Hydroelectric Project headrace tunnel lining

Chamelia Project 50% squeezed headrace tunnel

Under construction and study tunnels projects are summarised below:

Project	Tunnel length	Size	Status
Upper Marsyandi HEP (50 MW)	4km	7.3m	Construction
Upper Madi HEP (20 MW)	3.93 km	4 m	Construction
Sanjen (42.5 MW)	3.6 km	3.75m	Construction
Upper Sanjen (14.8 MW)	1.4 km	3.75m	Construction
Middle Bhotekoshi (102 MW)	7.2 km	5.7m	Construction
Rasuwagadhi (111MW)	4.3 km	6.0m	Construction
Rahughat (32 MW)	6.1 km	3.5m	Construction
Upper Trishuli-1 (216 MW)	9.82 km	6.5m	Construction
Middle Bhotekoshi (102 MW)	7.1 km	5.7m	Construction
Kabeli A (30 MW)	4.32 km	6m	Waiting Financial closure
Kathmandu Hetauda Road tunnel	7km	12m	Waiting Financial closure

Kaligandaki Koban (150MW)	6.2 km	5m	Bidding process
Upper Seti Storage (140 MW)	1.5 km	5m	Bidding process
Bheri Babai Diversion Multipurpose Project (48 MW with irrigation)	12 km	4.2m	Bidding process
Likhu IV (120 MW)	4.42km	4.8m	Bidding process
Tanahu Storage (140MW)	1.32 km	7.4m	Bidding process
Nyadi (20 MW)	3.8 km	3.5m	Power Purchase Agreement
West Seti (750MW)	6.7 km	10m	Project Development Agreement
Arun III (900 MW)	11.74 km	9.5 m	Project Development Agreement
Upper Karnali (900 MW)	2.4 km	9.5m	Project Development Agreement
Tamakoshi 3 (650 MW)	17 km	9 m	Project Development Agreement
Upper Marsyangdi HEP (600 MW)	9.2 Km	6 m	Project Development Agreement
Lower Solu (82 MW)	4.260 km	3.6 m	Power Purchase Agreement
Nalsyagugad storage (390MW)	9.2km	6.5m	Detail design in progress
Upper Modi-A (42MW)	4.8 km	4m	Detail design in progress
Mristi Khola (42 MW)	3 km	4.2m	Detail design in progress
East West Railway Project	45 km	8m	Detail Design Stage
Budhi Gandaki Storage (600 MW)	2km	12m	Detail design
Khare Khola (14 MW)	4.8km	3m	Detailed design
Upper Marsyandi-2 (570MW)	10 km	6m	Feasibility Study completed
Lower Arun (400 MW)	15 km	10 m	Feasibility Study completed
Upper Tamor (415MW)	8.7 km	7.8m	Feasibility Study completed
Kali Gandaki Gorge (275 MW)	6.1 km	4.5m	Feasibility Study completed
Solu Khola Small (40 MW)	4.1 km	3.45 m	Feasibility Study completed
Madi I (26.5 MW)	4.44 km	4m	Feasibility Study completed
Upper Marsyangdi (14 MW)	5.15 km	3.5m	Feasibility Study completed
Upper Arun (335MW)	7.1km	5.4m	Feasibility Study completed
Dudh Koshi (300MW)	5.6km	5.2m	Feasibility Study in Progress
Tamor Storage (530MW)	2.5km	7.2m	Feasibility Study in progress
Budhigandaki Ka HEP (130 MW)	3.447 Km	7.3 m	Feasibility Study completed
Budhigandaki Kha HEP (260 MW)	6.925 Km	7.2 m	Feasibility Study completed
Super Madi HEP (44 MW)	5.905 Km	4.4 m	Feasibility Study completed
Middle Modi (15 MW)	2.840 Km	4.4 m	Feasibility Study completed
Thankot Nagdunga Road Bypass Tunnel	2.5 km	10m	Feasibility Study