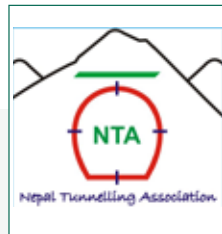


Nepal



Name: Nepal Tunnelling Association
Type of Structure: Non-profitable organization
Number of Members: Life members: 124, Corporate members: 11

ASSOCIATION ACTIVITIES DURING 2021 AND TO DATE

Due to COVID-19 pandemic and restrictions imposed by the Government of Nepal against mass gathering, we were unable to conduct a program last year. We are planning to conduct a Nepal Tunnelling Conference 2022 during Nov or Dec, which will be confirmed within the next three months, and we will circulate the information accordingly.

CURRENT TUNNELLING ACTIVITIES

So far, about 250km tunnel, mainly hydro, water supply, irrigation, mining, road, and sewerage have been excavated in Nepal.

The following current tunnelling activities are on-going:

- About 35 hydropower tunnels and caverns size ranging from 2.5m to 15m under construction by the drill and blast method
- A 26km long water supply tunnel excavated by the drill and blast and the semi-mechanized method is complete, but the project has suffered heavy losses due to last year's flooding (mainly at the dam/weir).
- A 12km long multipurpose tunnel of 5.2m diameter has been excavated by a double shield Robbins TBM with a segmental lining. The tunnel breakthrough was on 25th April 2019.



- 2.8km of road tunnel was excavated in 2021, this is half way through.

FUTURE TUNNELLING ACTIVITIES

Mainly hydro tunnels and a few road tunnels have been planned and are in the study phase initiated by the Government and private sectors. The following projects are under study:

1. Hydro tunnel projects:

- About 25 hydro power tunnels sizes ranging from 2.5m to 11m

2. Multipurpose projects (Hydroelectric and irrigation):

- Kaligandaki-Tinau Diversion Multipurpose Project: Tunnel = 30km
- Sunkoshi-Kamala Diversion Multipurpose

- Project: Tunnel = 16.6km
- Sunkoshi-Marin Diversion Multipurpose Project: Tunnel = 1km

3. Road tunnel projects:

- Hetauda to Bhimphedi = 3km
- Fast track Kathmandu to Nijgad = 7km (total 3 tunnels)
- Khurkot to Sindhuli = 6.4km
- Thansing to Toka (Kathmandu) = 4.2km
- Sanga pass crossing = 1.5km
- Yamdi (Pokhara) to Nayapul = 6km
- Dahune crossing (Butwal) = 6km

4. Rail tunnel projects:

- Kathmandu Metro = 66.1km
- East West Electrified Railway Projects with 10 tunnels of total length 26.7km
- Rasuwagadi (China boarder) to Kathmandu to Lumbini via Pokhara

STATISTICS

1. Length of tunnels excavated during 2021

11km completed using a TBM in Bheri Babai Diversion Multipurpose Project; and about 25km by conventional method.

2. Amount (USD or EUR) of tunnelling/ underground space facilities awarded in 2021

More than US\$100 M

EDUCATION ON TUNNELLING IN THE COUNTRY

Currently two university have started educating in tunnelling in Nepal i.e., 1) Tribhuvan University, and 2) Kathmandu University

1. Master program in tunnelling at Pokhara under Tribhuvan University
2. Master program in tunnelling at Dhulikhel under Kathmandu University
3. Masters in Engineering Geology/ Geology/Mining Engineering:
 - Central Department of Geology, Kirtipur
 - Trichandra Multiple Campus, Kathmandu
4. Bachelor in Science (with Geology as major):
 - Trichandra Multiple Campus, Kathmandu, Nepal
 - Birendra Multiple Campus (BMC) Bharatpur, Chitwan Nepal and
 - Central Campus of Technology Hattisar, Dharan Koshi, Nepal
 - Prithvi Narayan Campus, Pokhara