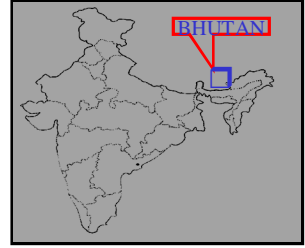




अनुसंधान के माध्यम से सेवा  
Service Through Research

## TALA DAM SPILLWAY, BHUTAN



### SALIENT FEATURES

Location	: Honka , Bhutan
River	: Wangchu
Power Generation	: 1020 MW
Maximum Discharge	: 10600 m <sup>3</sup> /s
Type of dam	: Concrete Gravity Dam Height 91m
Sluice Spillway	: 5 Sluices of 6.5 m wide X13.5 m
Radial Gates	: 13.5 m (H) 6.5 m (w)
Energy dissipator	: Ski-jump with 30 degrees lip angle

### MAJOR STUDIES

#### Comprehensive model scale 1: 60

- ☺ Approach flow conditions upstream of spillway and power intake
- ☺ Assessment of discharging capacity & pressures on sluice spillway
- ☺ Performance of sluice spillway and ski-jump bucket
- ☺ Estimation of excavation quantity for right bank
- ☺ Plunge pool layout



### BENEFITS

- 📄 Introduction of curvature in dam axis for containing ski-jump jet in river
- 📄 Reduction in excavation of right bank
- 📄 Reduction of thrust on turnnion of radial gates
- 📄 Remedial measures to eliminate cavitation damage on sluice profile
- 📄 Introduction of divide walls for improving performance of spillway
- 📄 Optimisation of plunge pool
- 📄 Shift of overflow spillway to left bank to avoid interaction of approach flow of right bank power intake