

Spatial Data Base for Hydropower Projects in Nepal

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Key words: Engineering survey

SUMMARY

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Key words,

Hydropower project, topographical survey, DGPS, seismic survey, environmental survey, land acquisition.

1. □ ABSTRACT

Nepal is facing shortage of electric power and having load shedding up to 3-8 hours/day from many years. Although with the total capacity of generation of 84000MW hydropower, it has only been able to produce around 1000 MW hydropower at the moment and planning to generate 10,000MW in a decade for which detail topographical and other surveys are prerequisite for planning and construction of hydropower project.

Apart from topographical survey, geological, seismic, hydrological, environmental, land acquisition (cadastral) surveys are also necessary to be carried out for a hydropower project. These survey activities are conducted in feasibility and detail project design(DPR) or

y involves acquisition of very high resolution imagery, extension of national network control points by DGPS, establishment of control points by precise traverse, leveling, detail survey by field or LiDAR survey method, bathymetric survey, demarking the land to be acquired and identification of land owners, land valuation. Geological, hydrological, environmental and seismic surveys spatial data are also linked to topographical survey data as spatial data base of the project.

This article briefly describes the method of preparation of spatial data base and their contents for hydro power project in Nepal.

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