



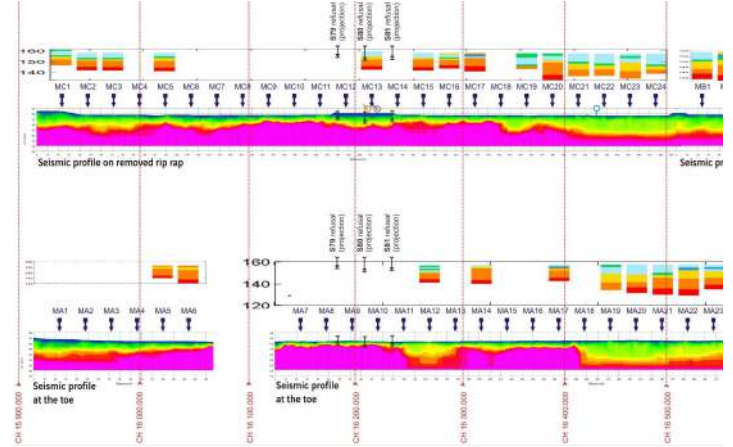
Nam Theun 2 - Downstream channel

On shore and aquatic geophysical survey for dyke inspection

Transforming your infrastructure into living assets



Downstream channel and karstic landscape at the back



2D seismic imaging of the dam and its foundation

Engineering Services	Monitoring Services
Platform Solutions	Mapping Services

Nam Theun 2 - an asset to provide protection from natural hazards

As per part of the specifications for the investigation of the emergency spillway on the downstream channel of Nam Theun 2 Dam, Lao PDR, SIXENSE were appointed by NTPC and the geotechnical consultant EDF/TEGG to conduct a surface based geophysical survey to detect the presence of cavities and assess the existing condition of the dyke at a location subject to sinkhole phenomena.

The bank of the channel at the spillway location is an embankment dam, lying on a karstified limestone foundation.

To ensure the stability of the dyke, and to design future strengthening works, the depth and location of existing features must be known as they may present a risk to the infrastructure.

A multi-method evaluation of the dam condition

A large pool of geophysical techniques were utilised to precisely map the internal structure and the foundation of the dam including aquatic techniques to investigate the river bed condition.

The Nam Theun 2 is a major infrastructure of the electricity supply network in South East Asia. Such condition surveys are essential to anticipate further maintenance works and maintain electricity production at its highest, and guarantee the safety of population living downstream of the hydraulic infrastructure.

- Gnommalat**
Lao People's Democratic Republic
- Started in 2017**
3 months
- Nam Theun Power Company (NTPC)**

Key figures

700
Microgravity stations

1 400
meters of 2D Electrical Resistivity Imaging

60
stations 1D MASW

1 400
meters of 2D Seismic Imaging

2 000
meters of Aquatic GPR