

# Numerical model calibration of waste dumps (MOK, WAVE and WEKESI) based on monitoring results

## Project description

The objective of this study is to demonstrate the effectiveness of the predictive numerical modelling of waste dump behaviour and confirmation the geo-mechanical characteristics of the lateritic soils stored in the dumps.

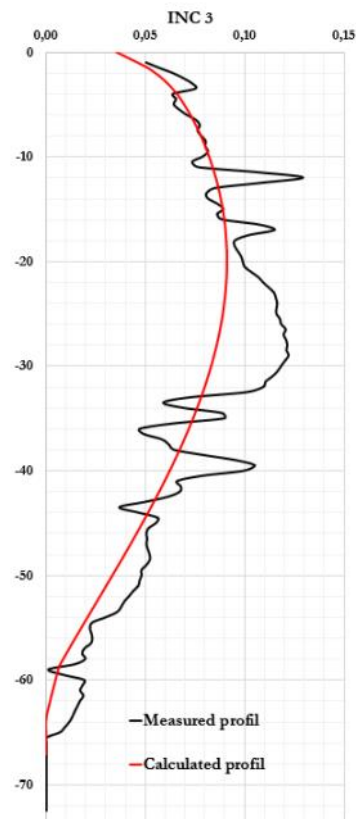
## Scope of work

Laterite waste dumps in the Koniambo Massif are currently being constructed with a storage rate of 40 m/year. Due to the increase of the yearly production, KNS plans to rise the storage rate up to 60 m/year.

Due to the lack of experience in New Caledonia of the behaviour of waste dumps under high storage rates and in order to validate the geotechnical parameters of the soils being stored, MECATER carried out a calibration of the numerical model of the waste dumps based on the monitoring data from 2014 until the end of 2021.

In this study the following steps were undertaken:

- Developing waste dump cross-section and simulating the construction rate;
- Simulating the monitoring tools;
- Defining intervals for the main geotechnical parameters;
- Calibration and validation of the results: comparison between the measured and calculated profiles and model validation.



KONIAMBO Nickel SAS

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KNS

2021

Project fees :

\*\*\*Euros

**MECATER**  
INGÉNIERIE