Scoping Study

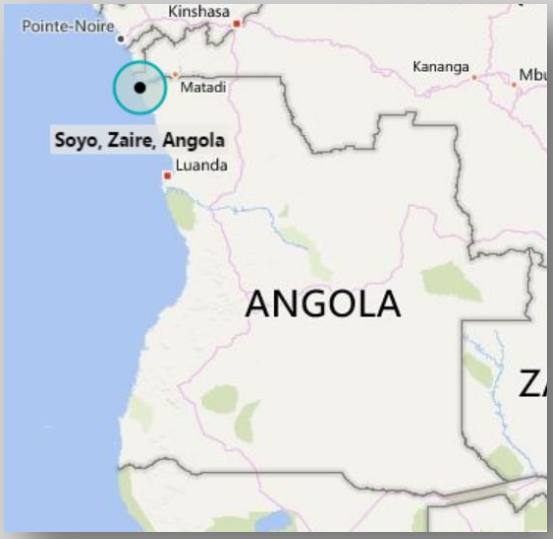
MINING LOGISTICS

Vale Fertil
Lucunga Phosphate Project

LOCATION
ANGOLA

SECTOR
PHOSPHATES

CLIENT
MINING COMPANY



OVERVIEW

In January 2013, A-Cubed was appointed (as Ports of Africa) by Vale Fertil to undertake a scoping study for port and logistics facilities for their phosphate project at Lucunga, south of the port of Soyo in northern Angola.

Vale planned to export bulk phosphate rock and import urea and potash in bulk, and with Soyo being the closest port to the mine site, wished to explore the feasibility of using the Commercial Quay at Soyo for this purpose.

With marine conditions at the Commercial Quay limiting economic size parcels to be shipped, a system to economically overcome this constraint was considered as paramount importance to the project. With Angolan ports having comparatively little recent experience in handling dry bulk cargoes, this was also considered as being a constraining factor.

SCOPE OF WORK & METHODOLOGY

A-Cubed was specifically tasked to consider appropriate shipping methodologies and cargo handling methods at the quayside and to provide order of magnitude cost models for capital and operational costs.

The study entailed a number of tasks including desktop research, a field trip to Soyo, meeting with various port officials on site and gathering data. This was followed by further investigations and enquiries on return to base along with consultations with the materials handling engineers from Ports of Africa's engineering partners.

The study methodology used proved a robust logistics system through the port to loading into economically sized oceangoing vessels at a proposed transhipment station in the stream. This system would need to be supported by appropriately engineered storage and transport processes that could be used for both the import and export of bulk commodities.