LONRHO OIL SERVICE TERMINAL, **GHANA**

Svašek Hydraulics has supported the development of a masterplan for an Oil Service Terminal in Ghana. The support consisted of 1) the establishment of the nearshore wave climate, 2) a wave tranquillity study, 3) coastline impact study and 4) the quantification of the maintenance dredging requirement.

The nearshore wave climate has been established by means of a SWAN simulations with which an offshore wave data set has been transformed to a nearshore wave data set. This transformed wave climate was input to both the morphological study and the wave tranquility study.

For various harbour layouts the wave conditions and associated downtime at the berths have been calculated with the **HARES** (HArbour RESonance) model suite, developed by Svašek Hydraulics.

The impact of the harbour on the coastline has been assessed by means of a coupled FINEL2D-SWAN model. The SWAN model delivers wave-induced forces and near bed orbital velocities to FINEL2D. FINEL2D calculates the sediment transport fluxes in the surf zone

both with and without the presence of the harbour. In that manner the absolute as well as the relative impact of the harbour on the sediment fluxes and thus on the coastline evolution could be assessed.

Analysis and processing of in situ measurements, supported FINEL2D simulations, were used to quantify the annual maintenance dredging both of the approach channel and the harbour basin.

CLIENT

Royal Haskoning

LOCATION

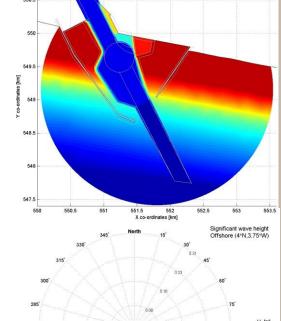
Ghana

DATE

2012

SERVICES

SWAN wave modeling, HARES wave tranquility study, FINEL2D morphological modeling, data analysis







Svašek Hydraulics Kratonkade 23 3024 ES Rotterdam The Netherlands

Internet E-mail

Telephone +31 10 467 13 61 www.svasek.com info@svasek.com