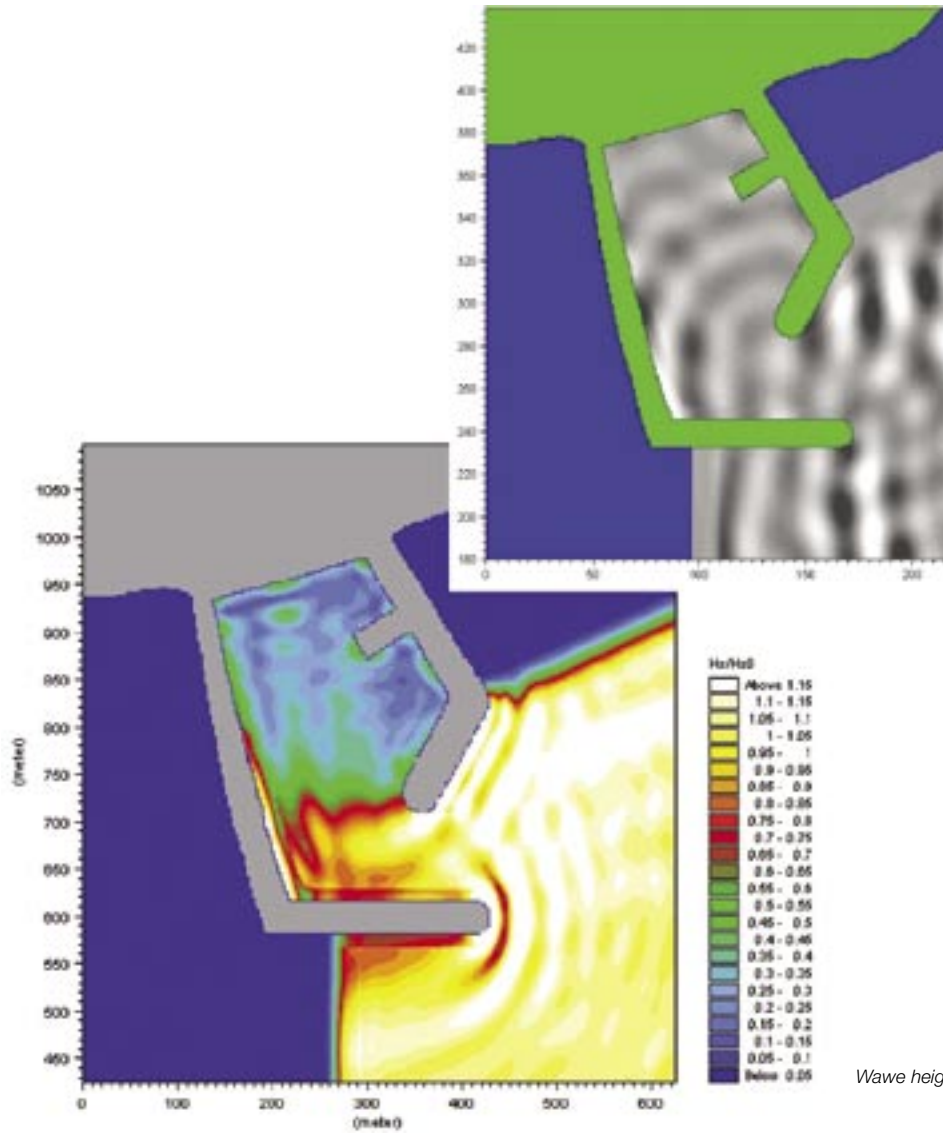


Halul Harbour Refurbishment, Qatar



Wave disturbance in harbour.

Wave height coefficients.

Halul Harbour is located on the southern side of Halul Island 80 kms northeast of Qatar. The refurbishment of the harbour commenced with a review of hydraulic design conditions and numerical wave disturbance modelling to determine the environmental parameters for the breakwater design.

The wave disturbance modelling was undertaken using MIKE 21 BW. Several different arrangements of the western breakwater were modelled to minimize the wave disturbance within the harbour. Based on these findings and with consideration to navigation,

optimisation of the breakwater layout was then completed.

Following agreement of the layout detailed design of the western breakwater was completed using CORE-LOC units as the primary armour. Further, 3D physical modelling was used to confirm the breakwater design. Technical and material specifications were also produced.

Services:

- Numerical wave modelling
- Physical modelling
- Engineering design of marine structures
- Technical specifications and drawings

Project period: 2001 - 2002

Client: Archirodon Construction (overseas) Co. S.A. Dubai

Subconsultant: DHI Water and Environment (physical modelling).