

Container Terminal Walvis Bay



The Namibian Ports Authority plans to develop a new container terminal which involves extensive land reclamation and dredging activities adjacent to Walvis Bay lagoon - an environmentally protected Ramsar site. Namport has therefore initiated an environmental impact assessment (EIA) to evaluate potential adverse effects of the new container terminal on the Walvis Bay environment during construction and operation. In case required mitigation measures shall be investigated to reduce such effects to an acceptable level.

Client

Namibian Port Authority

Completion

2010 (study)

2012 (1st phase, envisaged)

Type of Contract

Study & Design

Location

Walvis Bay, Namibia

Construction Costs

Euro 150 million (est. phase 1)

Consultancy Fees

Category 4 (see page 2)

Services

Numerical Modelling

Advice on Soil Investigations

Concepts and Phasing of Landfill

Coordination of EIA (done by CSIR)

Participation Stakeholder Meetings



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Project Description

The new container terminal shall be developed in three phases (Phase 1&2: 550m quay length each, Phase 3: 1200m) and shall provide water depth for vessels up to 8,000 TEU (Phase 2).

DMC, as lead consultant, was commissioned to carry out a comprehensive numerical modelling programme to assess the potential impacts of the new terminal including wave conditions, flow characteristics, morphological changes and plumes generated by dredging/ landfill activities. The effects were assessed by comparison of the present situation and the future development phases of the terminal.

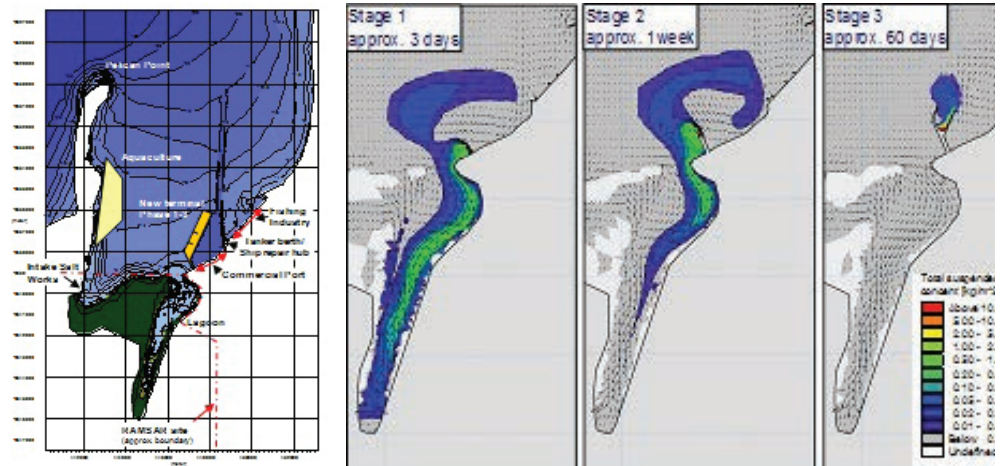
One main focus of the hydraulic analysis was put on the flow conditions at the lagoon entrance which were used to identify potential effects on water exchange in the vulnerable lagoon itself. Furthermore potential spills from fish factories and port operations have been assessed.

Based on the analyses carried out the footprint of the terminal was shifted by approx. 150m. It

could be shown that the effects on water exchange in the lagoon are within acceptable limits.

The dredging activities are of relatively small impact on the lagoon (only in the very initial phases of the project), provided that dredging methods are applied as proposed. The recommended dredging strategies are considering the phased development of the port as well as the availability of suitable fill material from dredging.

The EIA study completed on basis of (amongst others) the findings of the modelling programme resulted in a positive decision by the relevant ministries. The construction of Phase 1 is in tender process.



Consultancy Fees: 1: 50.000€ 2: 50 - 150.000€ 3: 150 - 300.000€ 4: 300 - 600.000€ 5: > 600.000€



Delta Marine
Consultants