DHI MARKET AREA: ENVIRONMENT AND ECOSYSTEMS

ENVIRONMENTAL MONITORING AND MANAGEMENT PLAN (EMMP)

Proactive and adaptive measures to protect the environment

Rapid coastal development, combined with population growth and global industrialisation, is placing coastal and marine environments under increasing pressure. New ports and harbours, coastal defense and climate change adaptation measures, as well as land reclamation and dredging works are imperative in order to support our existing and future prosperity. Most of these projects typically go through Environmental Impact Assessments (EIAs) to identify and mitigate potential environmental impacts. However, an EIA is usually based upon a range of assumptions about the timing and methodology of the construction works. These details are only available once the construction contract is awarded. They also keep changing throughout the course of the development in response to changing site conditions.

An ongoing Environmental Monitoring and Management Plan (EMMP) is a tool to proactively manage and confirm that impacts of dredging, reclamation and other marine construction activities do not exceed the stipulated Environmental Quality Objectives (EQOs) for the project.

THE CHALLENGES

- Meeting environmental conditions and commitments
- Protecting sensitive marine habitats in close proximity to the development
- Optimising construction methods to minimise the overall construction period
- Avoiding unnecessary delays or work stoppages due to overly conservative monitoring triggers
- Addressing cumulative effects as well as effects of natural background variability on monitoring triggers based on facts
- Providing transparency and confidence to stakeholders

OUR APPROACH

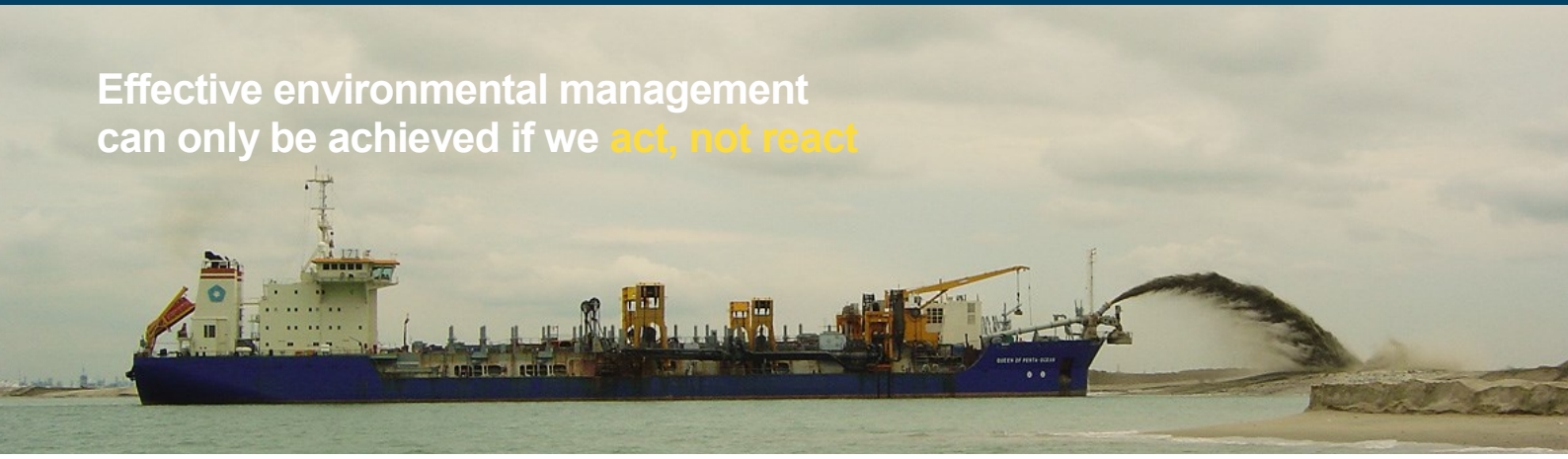
The international best practice approach to manage construction phase impacts from large scale marine infrastructure projects is a proactive, adaptive EMMP referred to as a Feedback EMMP. Developed by us, it's regarded as the most effective EMMP approach for control and mitigation of potential environmental impacts of construction in sensitive marine environments.

OUR SOLUTIONS

- Feedback EMMP to proactively and adaptively manage construction phase impacts
- Numerical modelling to optimise construction methods, reducing impacts and costs
- Advanced monitoring technologies to provide better data for modelling and management
- Web-based Decision Support System (DSS) to consolidate monitoring and compliance details and provide a simple management interface
- Multimedia animations of model and compliance results to enhance communication with stakeholders

THE ULTIMATE GOAL

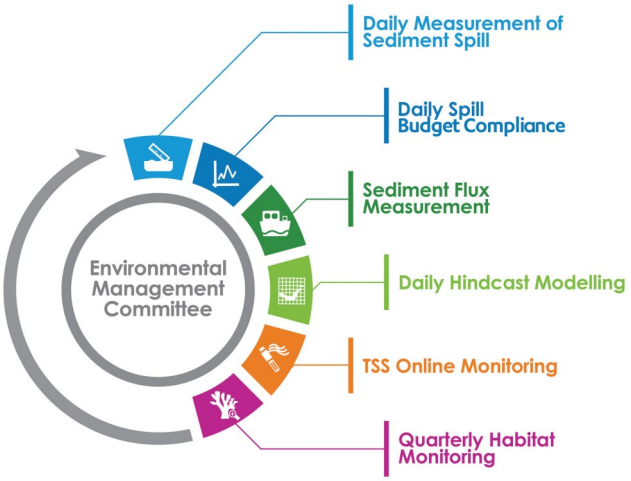
PREVENTION AND MITIGATION OF ADVERSE IMPACTS ON THE MARINE ENVIRONMENT



OUR TOOLS AND SERVICES

We can provide you with everything you need to effectively manage, prevent and mitigate impacts of construction and development activities on the marine environment. Our tools and services include:

- internationally recognised proactive adaptive Feedback EMMP approach
- MIKE Powered by DHI 2D and 3D modelling of hydrodynamics and sediment transport
- in-house environmental laboratory
- Decision Support Systems (DSS)
- in-house survey and monitoring team (marine biology, water quality and Metocean specialists) and equipment (including Acoustic Doppler Current Profilers (ADCPs) as well as turbidity and light sensors and sedimentation monitoring)
- in-depth understanding of dredging and reclamation processes, techniques and mitigation options
- 24/7 operational and emergency response capacity
- capacity building with THE ACADEMY by DHI



Key components of the Feedback EMMP

LEARN MORE

SOLUTION AND PRODUCT FLYERS

Learn more about what we can offer by reading our solution and product flyers, available in the dedicated collection on our Scribd library www.scribd.com/dhigroup

CASE STORIES

Read more about the projects we have undertaken worldwide by reading our case stories. They are available in a dedicated collection on our Scribd library www.scribd.com/dhigroup

Contact us: info@dhigroup.com
For more information, visit: www.dhigroup.com