DHI MARKET AREA: ENVIRONMENT AND ECOSYSTEMS

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Working together to create environmentally sustainable projects in water environments

An Environmental Impact Assessment (EIA) is mandatory for most projects likely to influence our environment. An EIA investigates the possible positive or negative environmental consequences of a proposed project, program or policy, including natural and human health as well as socio-economic aspects. In both fresh and marine environments, EIAs are challenged by the ubiquitous variability in effect parameters and the inherent dynamics of the ecosystems at stake. Most countries have their own EIA legislations or use international legislations in this context. Moreover, increasing emphasis is being placed on qualification of the uncertainty of EIA predictions as well as on the validation of EIA predictions and tools used for EIAs.

THE CHALLENGES

- Complying with increasingly strict environmental requirements/legislations
- Dealing with the cumulative impacts of existing/concurrently occurring projects
- Answering heightened community/NGO concerns about the environment
- Adapting to climate change
- Optimising projects with respect to time, energy and cost savings

OUR APPROACH

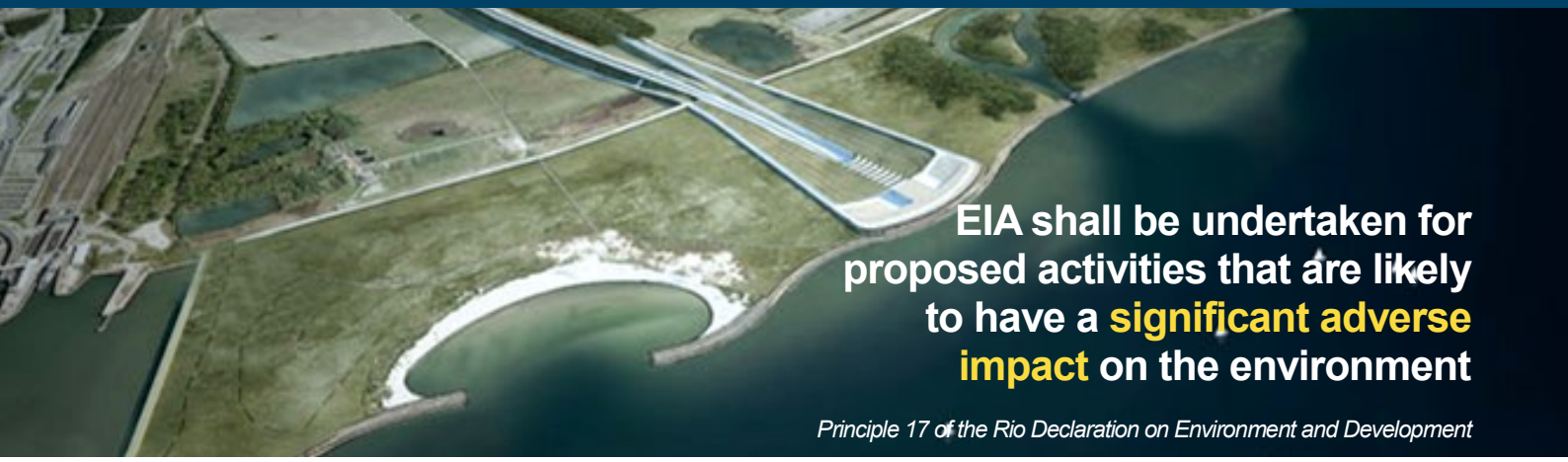
At DHI, we adopt an ecosystem-based approach to ecological challenges. Our high performance models are applied in concert with accurate field investigations, thus allowing more comprehensive descriptions of baseline components and impact quantifications. We have extensive ecological research skills, possess numerical modelling expertise and develop environmental technology. With these, we aim to address all challenges related to the uncertainty of EIA predictions, validations and tools.

OUR SOLUTIONS

- Numerical modelling (including ecological and habitat modelling) to optimise development, reducing impacts and costs
- Advanced monitoring technology to provide better data more effectively for model calibration and verification of predictions
- Multimedia animations of model and impact assessment results to enhance communication and engagement with stakeholders
- Integrated modelling approaches used to segregate and correctly quantify cumulative climate change impacts

THE ULTIMATE GOAL

ENSURING MINIMUM IMPACTS OF DEVELOPMENT PROJECTS ON THE ENVIRONMENT



OUR TOOLS AND SERVICES

For decades, we've performed EIAs worldwide on different types of projects. These include large marine constructions, oil and gas exploration and production, sewage discharges as well as restoration and conservation projects. Our tools and services include:

- numerical modelling with our MIKE Powered by DHI software:
  - 1D modelling of rivers and drainage channels (MIKE 11)
  - 1D and 2D modelling of flood risk (MIKE FLOOD)
  - Depth-integrated 2D modelling of hydrodynamics, sediment transport and coastal processes (MIKE 21)
  - 3D modelling of complex hydrodynamics and associated sediment or water quality processes (MIKE 3)
  - Simulating coastal evolution and shoreline stability (LITPACK)
  - Transforming an aquatic ecosystem into a reliable numerical model for accurate predictions (ECO Lab)
  - Agent-based modelling (ECO Lab)
- groundwater modelling (FEFLOW)
- underwater noise modelling/assessment
- habitat modelling
- in-house environmental/toxicological laboratories
- in-house field survey teams/services
- GIS and spatial data analysis and presentation
- remote sensing (DHI GRAS)
- in-house design and hosting of secure web-based data portals and Decision Support Systems (DSS)
- Rapid Impact Assessment Matrix (RIAM) for transparent assessment of environmental impacts
- capacity building and training by THE ACADEMY by DHI

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