

Example projects

Dredging project in Myanmar

In three estuaries in Myanmar maintenance dredging works are taking place in the navigation channels. For this project IMDC wrote the EIA which was set to national and international legislative standards, describing the expected environmental and social impacts and proposing possible mitigating measures. IMDC also performed a historical analysis of the coastline evolution and mangrove area dynamics based on satellite imagery.

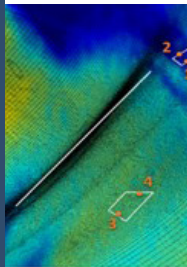


Offshore wind farms in Belgium

The Mermaid offshore energy park combines wind turbines with a test phase for wave energy. IMDC was responsible for writing the EIA for the construction, operation and decommissioning of the park. Additional studies accompanying the EIA included a life cycle analysis of the wind and wave turbines, plume modelling and a nautical safety study.

Dredging channels in Russia

IMDC provided back-office assistance for dredging operations in Russia which consisted of dredging a 50 km long sea channel and freeing the access channel to the port and deepening the port itself. The assistance included sediment plume modelling, reviewing the environmental management plan, preparing memos related to site-related environmental subjects and delivering environmental site engineers.



Biofouling in cooling water systems in Germany

IMDC performed a desktop study to determine the evolution of biofouling inside the offshore cooling water system on short and long term. Based on the outcome of this study a cleaning strategy was developed to take place during the next shutdown period. In addition IMDC has determined additional measures to be taken against biofouling on components on the intake risers.



International Marine and Dredging Consultants (IMDC) is an engineering and consultancy company specialised in a vast range of water related projects. Our highly qualified staff offers advice based on recent research results of leading universities and research institutes and hands-on experience acquired throughout the years.

One of IMDC's core activities is presented in this booklet: Marine Environment.

More information can be found on our website: www.imdc.be

Marine environment



As environmental awareness is increasing, environment scrutiny is becoming an intricate part of any water-related construction projects. More often special attention is given to reduce the ecological impact and monitor the short and long-term effects of marine activities on sensitive habitats. IMDC has the in-house expertise to assess environmental impacts for projects related to dredging, coastal development, blue energy and marine infrastructures. Our services span over various project phases: writing an environmental impact assessment

(EIA), obtaining the appropriate environmental permits and consents, performing on-site environmental management and managing stakeholders.

Most marine projects are legally required to provide an E(S)IA to evaluate potential environmental and/or social impact. During the conceptual phase of a project IMDC is involved in this process. As such, adverse effects on the environment may be assessed and mitigated at an early stage. Measures are also proposed to reduce impact to acceptable levels or to research new technological solutions. In addition, IMDC assists in organising the baseline studies and data-gathering activities, needed for the EIA or due diligence reports. During the execution phase any environmental monitoring that takes place can be tackled by IMDC.

Additional services related to specific activities are discussed further in this brochure.



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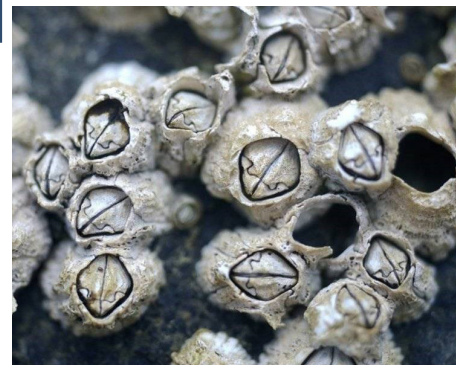
Environmental management of dredging

During dredging works the sustainable management of the seabed, rivers and estuaries is essential. Turbidity-generating activities can potentially cause harm to the environment. IMDC relies heavily on extended experience in measuring, modelling and studying sediment plumes and salinity intrusion in tender or execution phase. Also remote sensing

techniques and products like sediment maps to assess turbidity have been developed extensively for the past 10 years with our partner VITO-TAP. IMDC has extensive international on-site experience with environmental management of dredging and wet construction works around the world, eg in Europe, South-America and Australia.

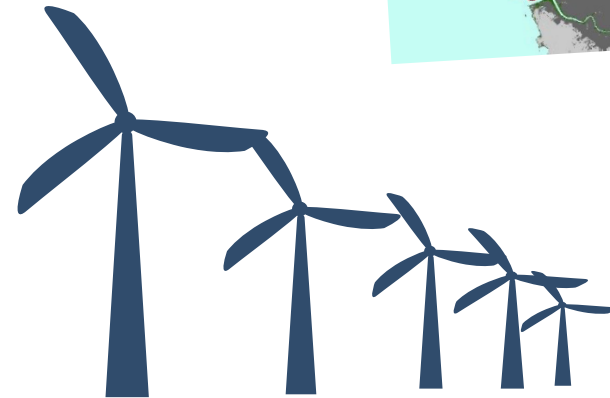
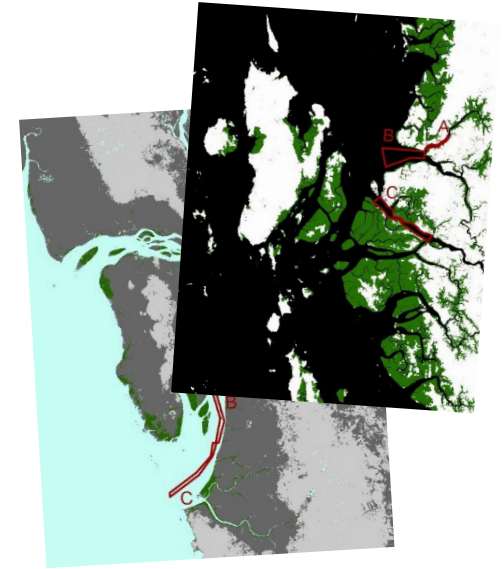
Marine Biofouling

In the marine environment the accumulation of organisms can be observed on all immersed structures. Settling on external and internal surfaces of man-made structures, biofouling organisms hamper their exploitation, causing losses and requiring maintenance. IMDC can assess the extent of the biofouling and provide tailor-made solutions based on the specific characteristics of the submersed infrastructure.



Integrated Coastal Zone Management

IMDC has been actively involved in the environmental aspects of Integrated Coastal Zone Management (ICZM). Examples of services are the assessment of ecological impacts of beach nourishments, analysis of coastline or mangrove evolution based on historical satellite images and setting up an online forecasting tool for beach water quality modelling the dispersion of faecal indicator organisms.



EIA related studies for blue energy projects

Wind, wave and tidal energy projects are becoming more popular in supporting the increasing global demand for sustainable energy. IMDC has the necessary tools to produce a life-cycle analysis for blue energy projects.

International attention also goes out to noise impacts related to the construction and operation of blue energy

devices since they can potentially cause harm to fish and marine mammals. IMDC has experience in assessing noise impacts and providing mitigating measures. Moreover IMDC can provide studies of nautical safety and impacts on radar related to energy farms.