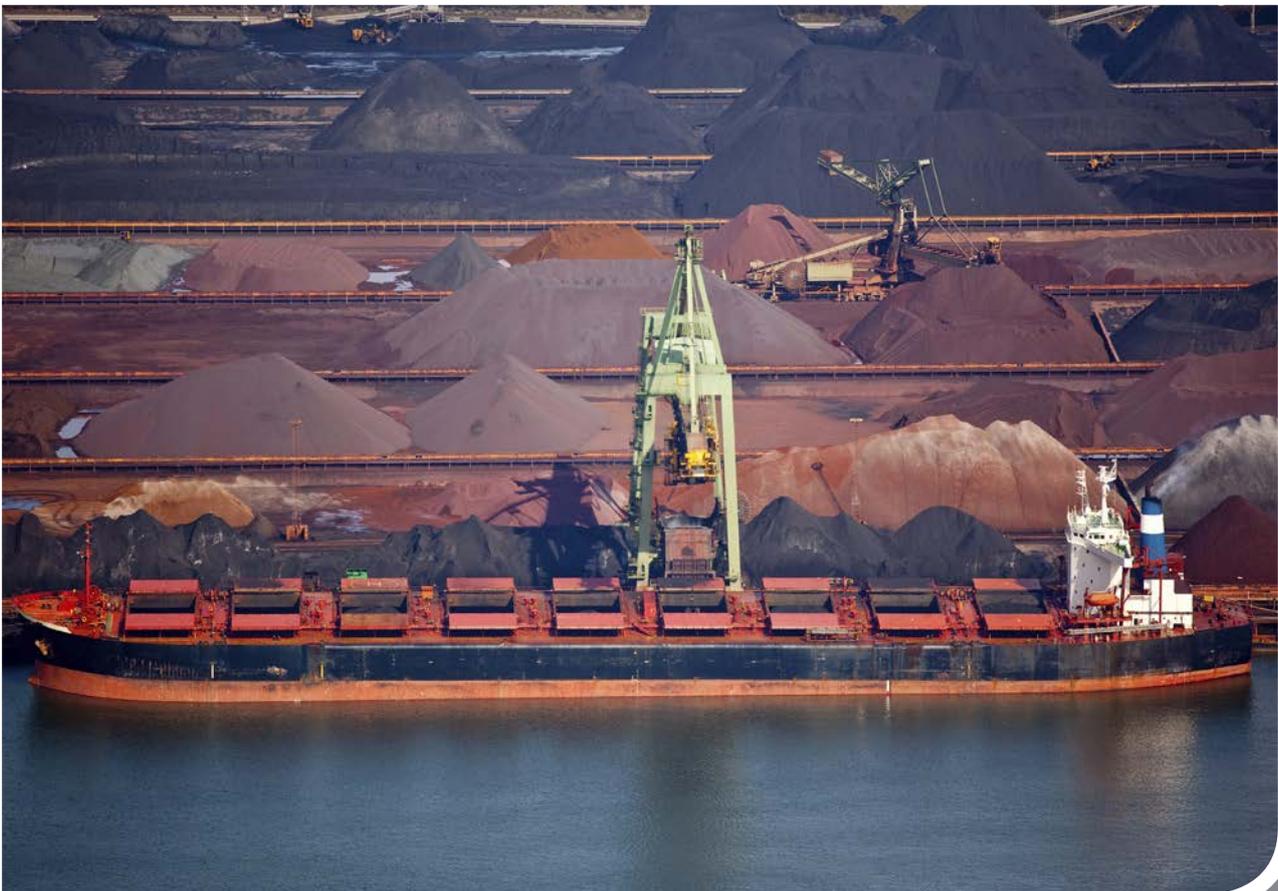




HR Wallingford
Working with water

Services for the mining and metals industry

Delivering effective technical solutions



Specialist services for the mining industry

There are significant engineering and environmental challenges associated with the development and operation of a mine. With today's increasing environmental awareness and oversight, owners and designers must address the industries and the public's expectations of environmental protection, safety and risk management, while developing and operating a successful facility.

HR Wallingford helps clients to address these engineering and environmental challenges. We are committed to working with owners, developers, designers and contractors to develop reliable and effective technical solutions based on sound engineering practice.



Expert advice

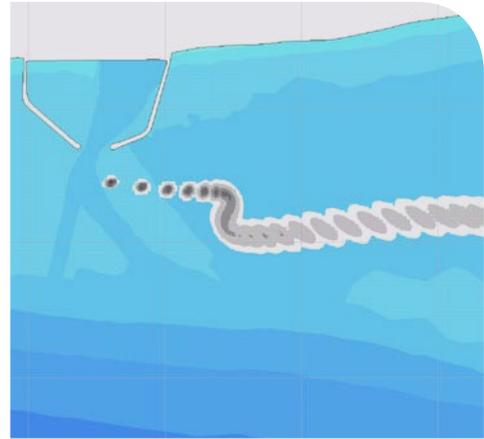
- > Meteorological and oceanographic investigations
- > Operational and extreme environmental conditions
- > Tsunami and extreme weather impacts
- > Surface water flow
- > Environment impact assessments
- > Strategic operational planning
- > Physical and numerical modelling
- > Marine terminal design
- > Marine navigation
- > Management of effluent discharge
- > Sedimentation and underwater sound studies for deep sea mining
- > Power and desalination design

Field investigations and data collection

- > Topographic, bathymetric and hydrological
- > Meteorological and oceanographic
- > Surface water hydrology

Environmental design criteria

- > Frequent and extreme conditions (e.g. wind speed, wave height, currents, fluvial flow, rainfall) including climate change impacts
- > Environmental hazard, such as tsunami and earthquakes
- > Sediment transportation and morphological analysis
- > Drainage networks and discharge outfalls
- > Propagation of underwater sound from marine mining



Marine terminal design

- > Assessment and design of marine terminals
- > Computational and physical modelling
- > Full-bridge navigation simulation
- > Dredging assessment and design
- > Modelling and optimisation of product throughput

Surface water management

- > Baseline studies
- > Surface water modelling
- > Potential impact assessments
- > Strategic planning and design
- > Dam inspection and assessment of risks from failure
- > Hydraulic design and modelling for power and desalination intakes and outfalls

Sedimentation management

- > Sedimentation of dams
- > Dispersion and re-suspension of sediments from marine mining
- > Contaminant transport in marine and freshwater
- > Assessment and management of impacts

Environmental management

- > Ecological and underwater sound modelling
- > Environmental impact assessments
- > Environment monitoring
- > Integrated water resources planning



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HR Wallingford is an independent engineering and environmental hydraulics organisation. We deliver practical solutions to the complex water-related challenges faced by our international clients. A dynamic research programme underpins all that we do and keeps us at the leading edge. Our unique mix of know-how, assets and facilities includes state of the art physical modelling laboratories, a full range of numerical modelling tools and, above all, enthusiastic people with world-renowned skills and expertise.

