RISK ASSESSMENT OF ENVIRONMENTAL NOISE IMPACTS
Using the Underwater Acoustics Simulator (UAS)

This two-day course teaches you the fundamentals of underwater acoustics modelling with the aim of being able to carry out biological risk assessments of environmental noise impacts for e.g. wind farms, seismic surveys, shipping, dredging and other human activities.

Marine mammals and other marine life face threats from many different human activities, including fishing, habitat destruction and man-made noise. Increased background noise and specific sound sources can impact marine animals in several ways. The potential impacts include sounds that cause marine animals to alter their behaviour, prevent marine animals from hearing important sounds (masking), cause hearing loss (temporary or permanent), or damage tissue.

The Underwater Acoustics Simulator (UAS) module in MIKE simulates propagation of noise in the far-field with a state of the art Range dependent Acoustic Model (RAM). UAS provides the option to specify a number of outputs in terms of sound exposure level or transmission loss depending on the objective of the environmental risk assessment.

COURSE TOPICS

- Introduction to underwater acoustics
- Biology and marine impact assessment
- Effects of noise on aquatic life (e.g. fish and marine mammals)
- Setting up a UAS model with site specific properties
- Interpretation of results and visualisation incl. introduction to Matlab post-processing
- Presentation of case studies
- Hands-on exercises

TARGET GROUP AND PREREQUISITES

Biologists performing an EIA, professionals in hydraulic engineering, acousticians and management working with coastal areas and or marine environments. No pre-qualifications are needed. Basic experience in either environmental risk assessment, hydrodynamic modelling (MIKE), or acoustics is useful but not a condition.

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THE ACADEMY BY DHI

THE ACADEMY offers a palette of courses and capacity building packages designed to fit your needs and challenges. We offer standard and/or tailored training - face-2-face as well as online.

MIKE Powered by DHI courses focus on practical skills, hands-on exercises and teaching you how to get the most out of your software. These courses also enable you to understand the power of the MIKE tools for building decision support systems.

Thematic courses allow you to apply concepts, applications and decision support principles to the entire business process within current areas: aquaculture and agriculture, energy, climate change, flooding, coast and marine, surface and groundwater, urban water, industry, environment and ecosystems, product safety and environmental risk, etc.

Our trainers are experienced professionals, many of whom are recognised international experts in their fields. The use of highly skilled trainers guarantees the quality of THE ACADEMY courses.

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The expert in **WATER ENVIRONMENTS**

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