



MODELLING LONG-TERM SHORELINE EVOLUTION IN COMPLEX COASTAL PROJECTS

Using MIKE 21 FM Shoreline Morphology (SM)

This two-day, hands-on course gives you a good understanding of the capabilities of the new MIKE 21 FM Shoreline Morphology (MIKE 21 FM SM). The aim is to enable you to set up and use the shoreline model in complex coastal projects as well as elaborate on the differences between shoreline model and for instance DHI's LITTORAL PROCESSES FM.

The traditional numerical tools used for studying coastal morphology include one-line models such as LITTORAL PROCESSES 1D FM and 2D models (eg MIKE 21 ST FM). However, the development of the coastal profile is not sufficiently accurate in these models to allow the models to simulate real long-term evolution.

The new MIKE 21 Shoreline Morphology combines the detailed 2D sediment transport fields from MIKE 21 ST FM with a one-line description for the shoreline evolution. This enables long-term prediction of shoreline evolution in cases where 2D effects are important, e.g. for complex bathymetries or coastal structures.

COURSE TOPICS

- Module 1: Introduction to MIKE 21 FM Shoreline Morphology (MIKE 21 FM SM)
Keywords: longshore and cross-shore sediment transport processes, acute and chronic erosion problems, MIKE 21 FM SM concept
- Module 2: Introduction to Shoreline Morphology Mesh Generator tools
Keywords: description of Shoreline Morphology inputs, making to inputs using the Shoreline Morphology Mesh Generator tools, hands-on exercises focusing on generation of inputs and model set-up
- Module 3: Using the Shoreline Morphology tools in practice
Keywords: Steps in completing a study with the MIKE 21 FM SM, speeding up morphological simulations, practical examples of speeding-up simulations
- Module 4: A Practical hands-on example: Palm Beach, Queensland

TARGET GROUP AND PREREQUISITES

Professionals in the fields of shoreline management and planning of coastal development schemes.

Participants should preferably have a background in sediment transport and a good understanding of the coastal processes. It is an advantage but no condition that participants have followed the course 'LITTORAL PROCESSES FM - Modelling longshore sediment transport and coastline evolution in 1D', 'MIKE 21 ST FM - Sand transport using flexible mesh', 'MIKE 21 SW - Spectral wave modelling' and 'MIKE 21 Flow Model FM - 2D hydrodynamic modelling using flexible mesh' prior to the course.

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-to-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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