



## COASTAL FLOODING - ANALYSIS AND MANAGEMENT

Preparing for flooding and the impact of climate change on your coasts

In this two-day, thematic course we teach you how to develop coastal flood risk assessments and maps. The course focusses on the estimation of extreme marine events, as well as introduction to the practical application of flood management tools. The effect of climate change on coastal floods is also discussed. Modelling tools are introduced through examples and project cases. The course contains presentations and discussions, but hands-on exercises are not included.

Populations increase on the coasts all over the world, putting in danger a growing number of people facing the coastal flooding risk. Climate change further increases this risk.

Coastal flood risk assessment is vital for decision makers in order to monitor urbanization and to minimise the costs related to extreme flooding. This assessment requires integrated analysis of extreme sea conditions, overtopping, assessment of flow through breaches and over dikes, as well flood hazard mapping.

### COURSE TOPICS

- Overview of tools for coastal floods analysis
- What to request and expect from a model
- Assessment of extreme marine events :
  - Definition of statistical water levels and wave heights from coastal models
  - Use of joint probabilities
- How to set up a flood model
- Definition of boundary conditions : overtopping, overflows, flow through breaches
- Mapping flood risks, values and economic costs related to flooding
- Methods to evaluate the effectiveness of proposed adaptation measures
- Examples of coastal flooding projects

### TARGET GROUP AND PREREQUISITES

Professionals working with adaptation to climate change, risk assessment and software tools for flood and waves management. It is preferable, but no condition, that participants have previous experience with shoreline management, statistical analysis and models.

### 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 tailored.

**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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