MIKE ECO LAB

Ecological modelling made simple

With MIKE ECO Lab you get a **complete numerical laboratory** for water quality and ecological modelling. You can **develop exactly the model you need** and describe the processes you wish. No ecological problem is too simple or too complicated for MIKE ECO Lab and there is **no time-consuming programming** involved.

APPLICATIONS

With MIKE ECO Lab, you simply define the process using standard templates as a basis.

It lets you transform any aquatic ecosystem into a reliable numerical model for accurate predictions.

TYPICAL APPLICATIONS

MIKE ECO Lab is the ideal software for:

- Water quality and ecological studies related to subsurface and groundwater, rivers, wetlands, lakes, reservoirs, estuaries, coastal waters and the sea
- Spatial predictions of any ecosystem response
- Simple and complex water quality studies
- Impact and remediation studies
- Planning and permitting studies
- Water quality forecasts
- Modelling complex feedback loops via a unique and innovative 3-way MIKE ECO Lab coupling with two and three-dimensional hydrodynamics and mud transport (for example, to predict sea grass growth and death in areas subject to increased siltation).

FEATURES

One of the preconditions of ecological modelling is an accurate flow model for the area of interest. MIKE ECO Lab integrates seamlessly with the MIKE suite of flow simulation models covering all aspects - ranging from 1D, 2D and 3D free surface modelling to integrated hydrology:

- MIKE HYDRO River (1D)
- MIKE 21 (2D)
- MIKE 3 (3D)
- MIKE SHE (Hydrology)
- MIKE+ Collection Systems (MIKE 1D)

MIKE ECO Lab works out of the box, using predefined templates covering standard water quality issues.

The predefined templates can be used as the basis for user-defined ecosystem models.

You may also start from a blank template making use of the wide range of libraries of constants and functions, which make it easy to generate and edit your own templates.

BENEFITS

MIKE ECO Lab combines the best of two worlds - you get access to our well-proven and widely used standard water quality models and you get complete freedom to include your own know-how or research ideas and test them against your field data.

MIKE ECO Lab models work across the range of 1D, 2D and 3D MIKE modelling packages - as will your own templates.

You can focus on the processes and forget about programming. You can exchange ideas and models with colleagues around the world. Simply send them a copy of your templates.

As MIKE ECO Lab contains a generic equation solver, it can also be used for generic post-processing of hydrodynamic results, for example, in calculating flood risk indices or scour risk formula.

MIKE C-MAP and MIKE ANIMATOR PLUS

Setting up the basic model bathymetries is normally a tedious and expensive part of coastal and marine modelling projects. MIKE C-MAP can reduce this task to minutes, offering model bathymetries generated fast and easy from an electronic chart database. With MIKE C-Map, you no longer need to manually digitise your model bathymetries.

Regardless of how well you undertake your modelling work, clear communication of results is crucial to its value and recognition. MIKE ANIMATOR PLUS turns model results into amazing 3D video presentations, facilitates communication between specialists and non-specialists, and demonstrates your modelling insights better than any printed material.