Release Notes 2026 MIKE 21

Contents:

Introduction

Welcome to Release 2026.

In this Release Note you will find information about new features, improvements and fixes, and what you need to know to install and get started with Release 2026.

MIKE 21 is the world's leading modelling package for 2D free surface flow, waves, sediment transport and environmental processes. It is the true work horse of estuarine and coastal modelling with a wider range of facilities and modules than any similar package.

System requirements

Supported Operating Systems

The supported operating systems listed below have been tested in accordance with MIKE's Quality Assurance procedures. DHI's warranty, as set out in the General Terms and Conditions (Schedule 1) for MIKE software and Software Maintenance Agreement (Schedule 4) only apply when MIKE software is installed and used on these supported systems:

Windows: Windows 10 Pro version 22H2, Windows 11 Pro versions 24H2 & 23H2, Windows Server 2022 version 21H2

Linux: Ubuntu 20.04 LTS, 22.04 LTS, 24.04 LTS, Red Hat Enterprise 8 and 9

Any operating system **not listed** is considered **unsupported**. Installing or using MIKE software on an unsupported system is at Licensee's own risk and DHI provides **no warranty**, **no maintenance coverage**, and is **not obligated** to offer support or troubleshooting.

The supported Linux distributions are those that have been tested and verified by DHI for MIKE 2026. Other distributions may, or may not, work and are not recommended. However, past versions of MIKE Software have been successfully installed on other Linux distributions, including CentOS, Ubuntu Kylin, Galaxy Kylin (V10), AlmaLinux and Debian (64-bit).

Please note: Even if an operating system is listed as supported, it will be considered **unsupported** if MIKE software is run in a virtualized environment, e.g., a guest operating system or a Docker container.

Minimum hardware/software requirements

Processor	Compatible with x64 instruction set architecture, 2.2 GHz or higher*
Memory (RAM)	4 GB or higher**
Storage	64 GB or higher**
Display	Resolution 1024 x 720 (High-Definition) or higher, 24-bit color (true color)
Graphics adapter	64 MB RAM (256 MB RAM or higher recommended), 32-bit true color***
Software requirements	Microsoft .NET Desktop Runtime 8.0.0 (or later patch)

* MIKE 21 is developed, built, and tested using Intel® technology on Intel® processors.

** The actual required amount of memory and disk space depends on the usage (application, model setup, size of data files etc.)

*** MIKE 21 Flow Model FM utilising GPU requires a Nvidia® graphics card with a compute capability of 7.5 or higher. Please note that some of these graphics' cards have varying performance in single compared to double precision calculations. The GPU functionality is based on version 13.0 of the Nvidia® CUDA® Toolkit.

Installation

To install MIKE 21, please go to the MIKE Zero product folder and execute the setup.exe file from the downloaded, un-zipped installation files. Press the 'Install' button to begin installation.

The setup program will automatically install all necessary files and folders onto your computer. Additionally, an entry is created in the Start Menu for MIKE Zero.

Please note that a separate installation guide, including system requirements, for MIKE Software for Linux is available here.

Licensing

With Release 2026, we are introducing a new licensing system for MIKE software.

For on-line users, the new Internet License Server is more secure and robust, and less dependent on a stable internet connection. This should significantly increase the overall reliability of the Internet License Server.

For off-line users, the main difference is that dongles and license files are replaced by a Network License Server that is locked to specific computer. Just like the old dongles, a Network License Server can distribute licenses across a local network.

The existing Internet License Server will be phased out by the end of 2026. We will communicate more details of this phase-out to users of the existing system in Q2 2026.

In the new system,

- Every company needs an Administrator to manage Entitlements. This person will be created automatically by Customer Care.
- The Administrator can add Users in their company's Webportal.
- The Administrator can set up Local License Servers for off-line usage.
- Users can configure their connection to the Internet License Server or a Local License Server from the new desktop DHI License Manager.

All the required files will be installed during the MIKE Software installation. The details of the installation, configuration and connecting to your License Server are described in the documentation for the DHI License Manager.

Note: Starting any MIKE Software without a valid license will cause the program to run in demo mode. When running in demo mode, the software has access to all editors, computational engines and editing facilities. The restrictions that apply to saving setups and executing simulations are product specific.

Product invocation

Launch 'MIKE Zero' from the Windows Start menu. Then you can select MIKE 21 from within the MIKE Zero Shell.

Support

For general support, please refer to our Customer Care Portal.

If you experience any difficulties, or if you have questions, please contact our Customer Care team at mike@dhigroup.com.

You can also contact your local Customer Care team for support in your local language. A list can be accessed from here.

New features and fixed issues

Every new release of MIKE Software consists of new modules, new features and/or corrections to problems or significant inconsistencies discovered in previous releases. Please find below short descriptions of the most significant news.

New features and improvements

Module/type	New feature
MIKE 21 FM	New 1D Transect Wave Models have been introduced in MIKE 21 Wave Model FM. This will enable quick setting up of high-resolution cross-shore wave transect models that run far faster than full 2D simulations (see Figure 1).
MIKE 21 FM	New scientific implementation of porosity in the phase resolving wave models. For the first time, this functionality has been extended to MIKE 21 Flow Model FM for solving the 2D shallow water equations. Additionally, porosity zones can now be specified using the material zone map on the 'Domain' page.
MIKE 21 FM	Two new options (an empirical approach and an advanced physics-based solution) for simulating cohesive sediment flocculation with increasing complexity and accuracy have been added to the Mud Transport module (see Figure 2).
MIKE 21 FM	In MIKE 21/3 Wave Model FM the performance of wave generation calculations for irregular waves has been significantly improved.
MIKE 21 FM	In MIKE 21 Spectral Wave Model FM the implementation of the parametric tail above the cut-off frequency has been improved.
MIKE 21 FM	Many small corrections and improvements including: • In the MIKE 21 FM engine, the stability across culvert and weir structures has been improved. An incremental reduction in time steps has been included in the new solution. • For the Mud Transport module, a feature to specify the power constant for settling when using flocculation method has been added (see Figure 3). • For the Mud Transport module, option to specify the type of wave height on the 'Forcings' page as either RMS or significant wave height has been added. • The default shear stress formulation in MT is now set to "RMS (Soulsby et al. 1993)" • In the flow models, a new option to include floating gate structures (specified using distance from the water surface) has been added (see Figure 4). • Ability to specify initial conditions as surface elevation and velocities in MIKE 21 FM has been added. • The Hydrodynamic module now supports outputting discrete line series data. Additionally, bathymetry has been added to the available output items, and support for vertical line series output has been introduced. • In MIKE 21 Flow Models FM, the control points for gate structures have been clarified in the graphical interface for ease of use (see Figure 5). • New option for output of directionally integrated source term information in MIKE 21 Spectral Wave Model FM. • New option for output of directionally integrated information in MIKE 21 Spectral Wave Model FM as discrete values. Here, the output will be saved in a dfs1 file with non-equidistant spatial axis (frequency).
MIKE 21 FM	The GPU functionality for MIKE 21 Flow Model FM is based on version 13.0 of the Nvidia® CUDA® Toolkit, which requires an Nvidia® graphics card with a compute capability of 7.5 or higher. Consequently, all GPUs based on the Pascal and Volta architectures are no longer supported.
MIKE ECO Lab	Performance of the MIKE ECO Lab 2.0 engine has been significantly improved.

MIKE ECO Lab	A new MIKE ECO Lab Experimenter tool has been developed as a simple interface to the MIKE ECO Lab 0D engine. This tool allows for quick modifications and run of experiments on a MIKE ECO Lab template without preparing a fully hydrodynamic simulation (see Figure 6).
MIKE Zero	Data Extraction FM has been improved and extended, for example, to better support structured dfs2 files. It is now possible to input dfs2 files to utilise the full functionality of Data Extraction FM (including, for example, discharge calculations). In addition: • Ability to extract discrete line series data has been added. • New vertical line series output has been added. See Figure 7.
MIKE 21 FM	The MIKE 21 Toolbox tools 'Tide Prediction of Heights' and 'Tide Prediction of Currents' have been significantly improved. Harmonic analysis techniques have been updated and improved after Foreman et al (2009), possibility to use NetCDF (.nc) files as input for tidal constituents has been added, and the overall performance of calculations is now significantly faster.
MIKE Zero	Many small corrections and improvements including: • Start Page update: You can now choose whether recent .dfsu files open in Data Manager or Data Viewer, giving you more control over your workflow (see Figure 8). • The MIKE Zero "Help" menu has been extended with additional resources (see Figure 9). • In the Result Viewer, the default file type is automatically set to MIKE 21 FM Result File when MIKE Zero is set to ‘Marine’ mode. • Numerous erroneous dialogs (for example, when cancelling an operation) have been removed from MIKE Zero for a smoother experience.
MIKE Zero	The following products, features and tools are fully decommitted with MIKE 2026, and are no longer available in the installers: • MIKE Cloud Explorer, including the MIKE Cloud sign on component, the option to browse for .mesh files in MIKE Cloud, the “Simulation Launcher” and “Cloud Explorer” tools. • Flood Modelling Toolbox • WS Wave Analysis Tools Moreover, starting with MIKE 2026, MIKE HYDRO Basin will be distributed separately from MIKE Zero and comes with its own dedicated installer.
Future of MIKE 21 Bousinessq Waves	MIKE 21 Bousinessq Waves is planned to be removed from the installation package in the near future. The time for removal will be approximately 12-months from the release date of MIKE 2026 (this release).

Fixed issues

Module/type	Error/Inconvenience
MIKE 21 FM	Fixed an issue where, in certain cases, the threshold frequency used for separating wind sea and swell in MIKE 21 Spectral Waves FM output was incorrect.
MIKE 21 FM	Fixed an issue in the dredging implementation of the Mud Transport (MT) module where cases specifying a distance below the surface or above the bed greater than the water depth were not handled correctly.
MIKE 21 FM	Corrected an error in the calculation of ground heat exchange for water bodies covered by ice. The fix ensures that ground heat exchange continues when liquid water exists beneath the ice.

MIKE 21 FM	Fixed the definition of directions for specified discharge per length for a dike structure in MIKE 21 Flow Model FM to align with the documented specification.
MIKE 21 FM	Resolved an issue where tidal-potential calculations occasionally generated incorrect water level values due to inconsistencies in selecting the start hour of the simulation.
MIKE 21 FM	Corrected an error where extracted peak wave direction is saved as radians despite values being defined in degrees.
MIKE 21 FM	Resolved an issue reading OceanWeather data files in Wave Spectra Converter tool.
MIKE 21 FM	Differences in handling of flood and dry areas in HD and SW, that may lead to waves on dry land in Coupled modelling, have been addressed.
MIKE 21 Mooring Analysis	Corrected error that in some cases gave the wrong wave heading angle for a wave generated from wave parameters.
MIKE 21 Mooring Analysis	Corrected error in the calculations of fender and AutoMoor position when the vessel is initially displaced.
MIKE ECO Lab	Corrected error related to particle tracking/ABM simulations using MPI parallelization.
MIKE ECO Lab	Resolved issue with dynamically spawned ABM particles from mesh elements and MPI simulations.
MIKE ECO Lab	Fixed the following issues related to hot start sources for ABM particles: • Erratic error message on not found/wrong particle Ids • Particle age and source ID not correctly set from hot start data when using MIKE ECO Lab 2.0

Figures

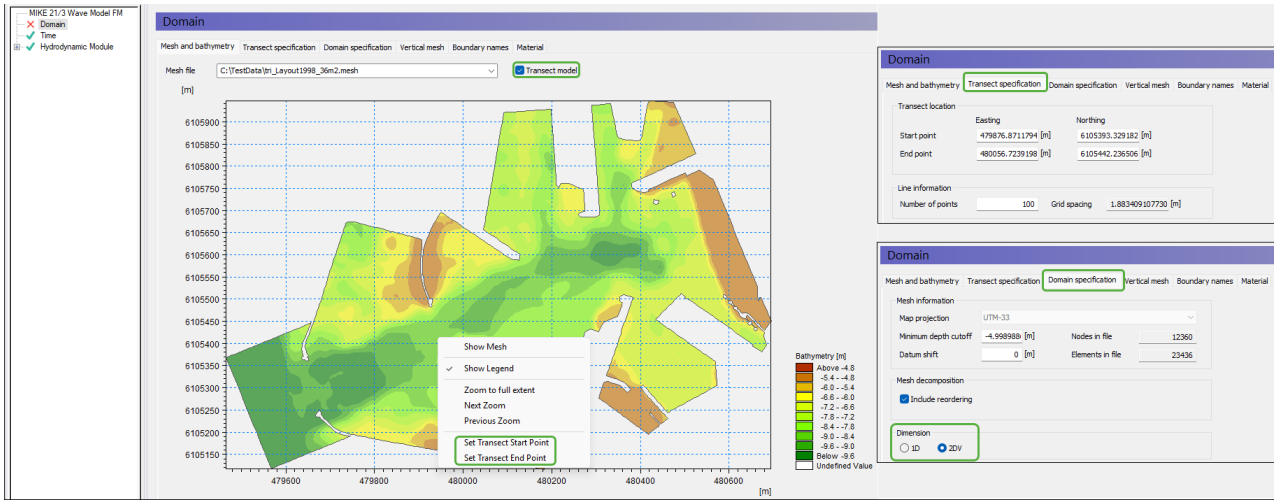

Figure 1 – Transect model in MIKE 21 Wave Model FM

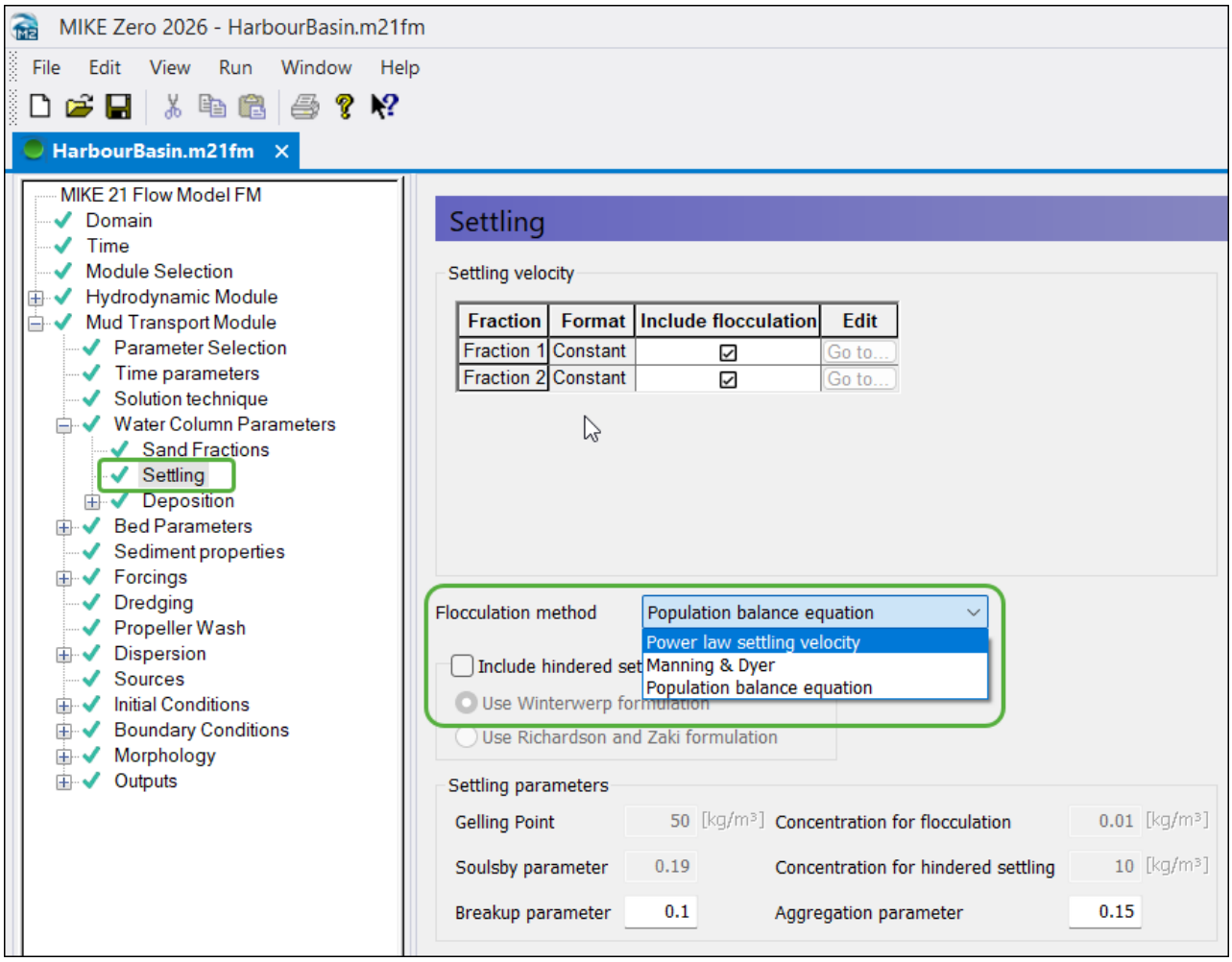

Figure 2 – Flocculation method in Mud Transport module

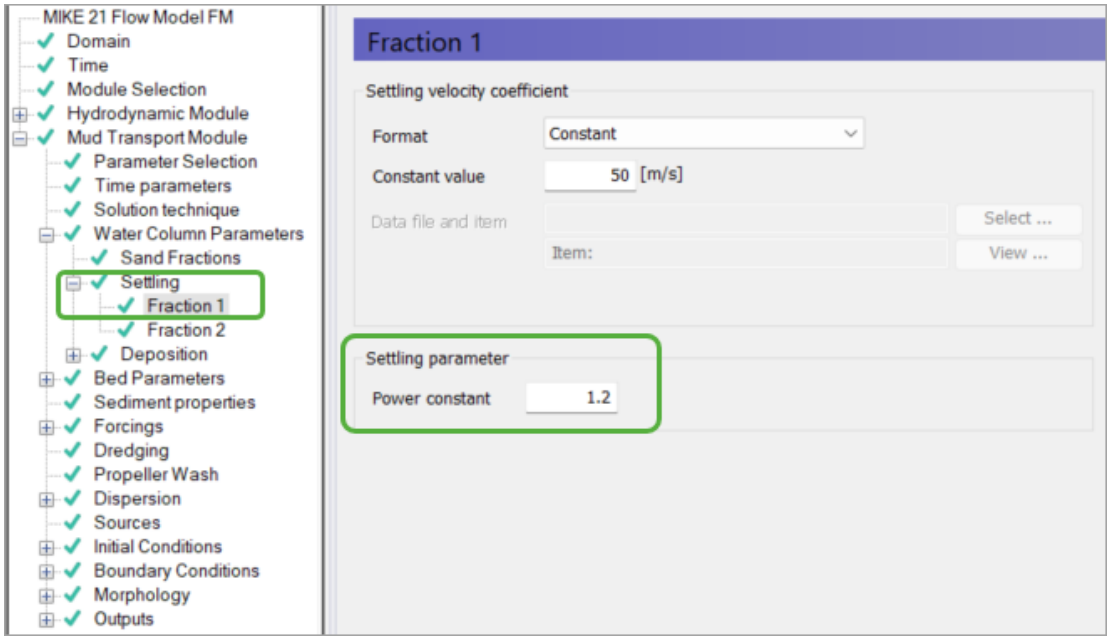

Figure 3 – Specifying the Power constant for settling when using flocculation

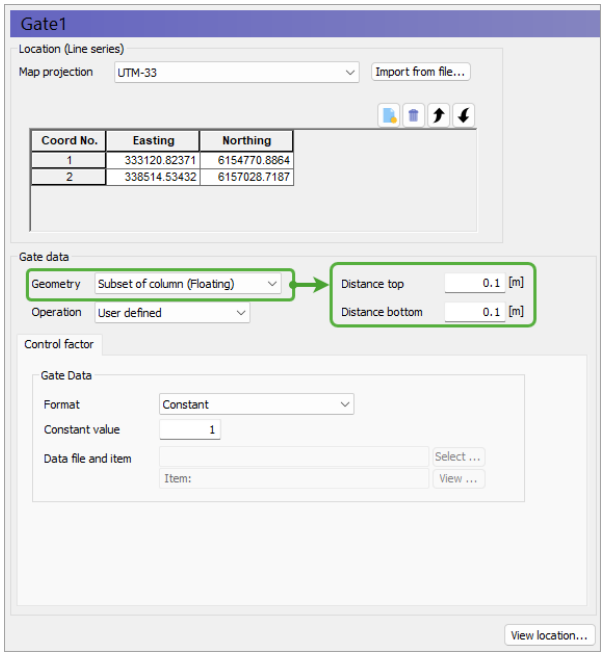

Figure 4 – Including a floating gate structure specified using distance from the water surface

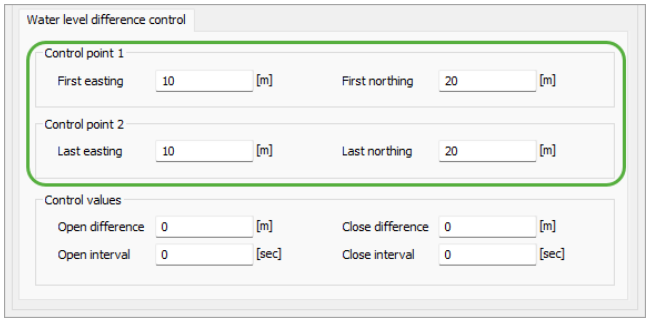

Figure 5 – Clarification of control points for gate structures

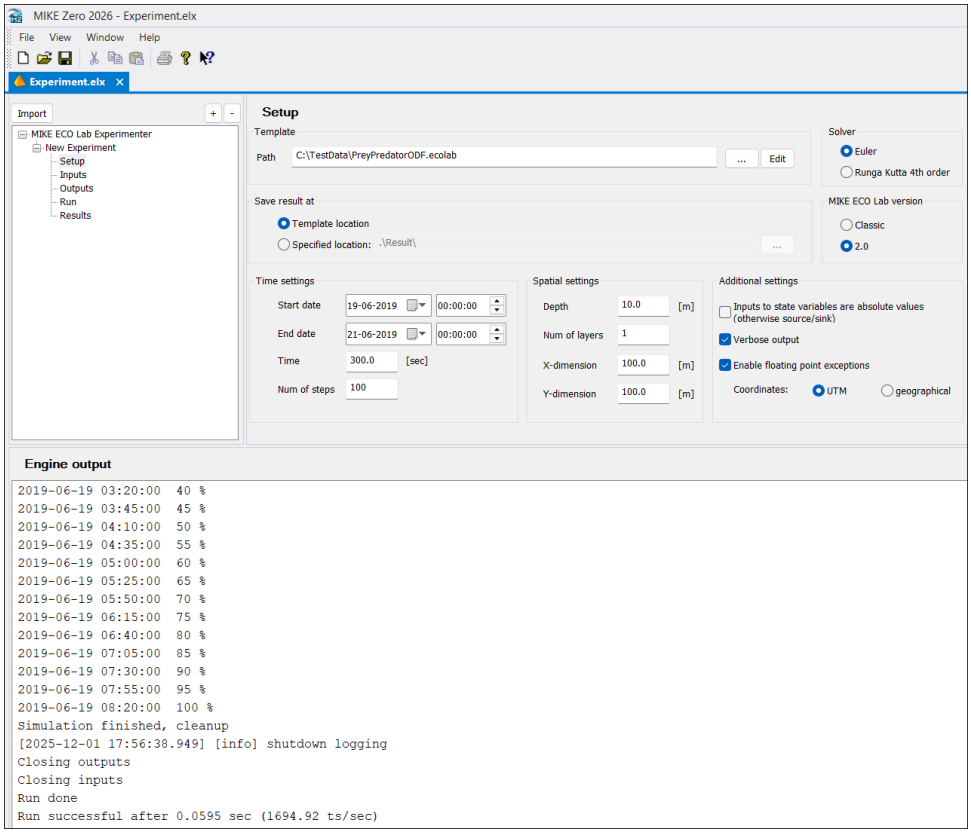

Figure 6 – MIKE ECO Lab Experimenter

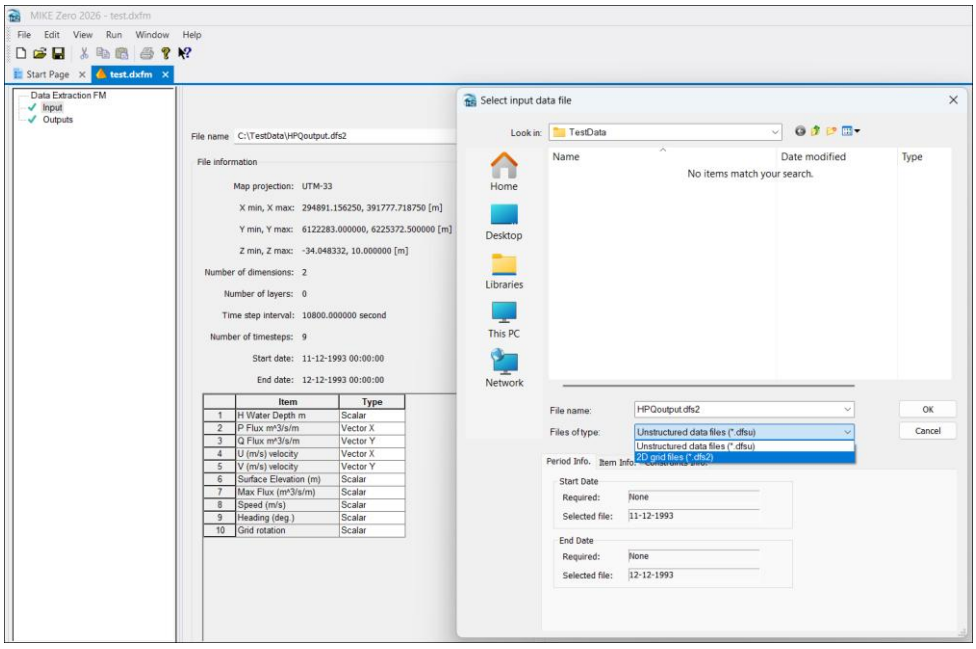

Figure 7 – Support for dfs2 input files in Data Extraction

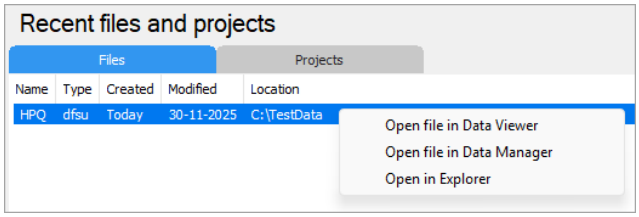

Figure 8 – Extended options for opening recent .dfsu files

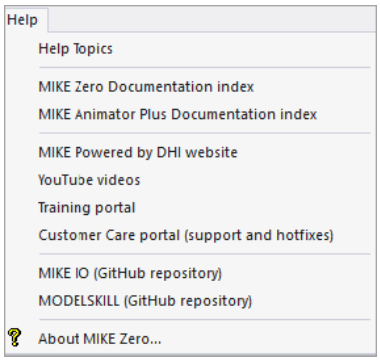

Figure 9 – Extended MIKE Zero Help