

Industrial post.doc: Impacts of marine sediment resuspension

About DHI

DHI is a global and independent company dedicated to working on challenges within the fields of water and environment and sustainability. Within these fields, we provide a wide range of advisory, digital advisory, research and water governance services as well as providing leading edge MIKE technologies and products to the market. At DHI, we are constantly looking for passionate and talented people who are eager to join our team.

By joining DHI, you will not only become part of a dynamic and collaborative global team of experts; you will be empowered to innovate, engage and grow in your area of expertise. DHI is committed to disseminate our knowledge effectively and across our worldwide network of offices.

Short Teaser

Do you want to advance process-based modeling of natural and anthropogenic induced sediment resuspension events to quantify environmental impacts in coastal and marine systems and bring the scientific developments into practical engineering? Then this industrial postdoc position is for you!

Responsibilities and challenges

We are looking for an industrial postdoc within our environmental team in our Marine and Coastal Global Business Unit to advance model formulations of nutrient release and oxygen consumption associated with natural and anthropogenic suspension of coastal and marine sediments to the water. The formulations are to be implemented and tested in the MIKE Powered by DHI marine modelling suite. The industrial postdoc is executed in collaboration with the Technical University of Denmark.

The main responsibilities and challenges in the job are:

- Identify key drivers controlling nutrient and oxygen fluxes resulting from resuspension events.
- Performing controlled laboratory experiments linking nutrient and oxygen fluxes to sediment characteristics and resuspension frequency.
- Developing model formulations of biogeochemical processes associated with resuspension of sediment into the overlying water column.
- Incorporation of the resuspension formulations into existing MIKE Powered by DHI software for coupled hydrodynamic-ecological modelling
- Validate and/or verify the formulation against laboratory and field measurements.
- Perform sensitivity tests and model scenarios assessing the ecological impacts of resuspension events
- Disseminate results at conferences and international scientific journals.
- Execute the developments with frequent coordination and technical alignment with company

(Anders Erichsen) and the university (Prof. Karen Timmermann) mentors.

Qualifications and personal skills

We are looking for a new colleague who will join us on our quest in solving the world's water problems and have the following qualifications:

Required:

- Excellent understanding of coastal biogeochemical processes and modelling.
- Good analytical skills and an ability to define detailed research questions and uplift to engineering practice.
- Proven skill in technical dissemination in oral presentations and in high-quality journal articles.
- Experience in computational programming in languages such as C++, Matlab or Python.
- Proactive and able to take initiative and ownership of your tasks.
- Take enjoyment in collaborative research with your peers and colleagues and strive for cutting-edge research outcomes.
- A completed PhD within the last 5 years (requirement by the funding scheme "Innovation Fund Denmark")
- Ability to start on the position no later than 1st of June 2026 incl. the effort to secure a Danish working permit (requirement by the funding scheme "Innovation Fund Denmark")

Desirable:

- Prior experience with laboratory work
- Prior experience with sediment-water interactions.
- Prior experience with handling of large data sets.
- A background in coastal engineering, chemical engineering, applied mathematics, or oceanography.

We offer

To work at DHI means being part of an organisation that is the global leader in solving the world's toughest challenges in water environment. We will offer you:

- An innovative job within a cutting-edge research field.
- A team of highly motivated colleagues in the field of natural coastal systems and nature-based solutions.
- Professional and personal development. We empower our people. We ensure that they have the freedom to innovate and grow.
- The position is time-limited to 2 years and 3 months with latest start June 1st 2026
- Salary conditions follow national agreements for university employees.

Office location

The position is a collaborative position between the Technical University of Denmark, Campus Lyngby (Prof. Karen Timmermann) and the DHI office in Hørsholm, Denmark. The primary office location is Hørsholm. There is also an office at the Technical University of Denmark for interaction with university researchers.

How to apply

- Please submit your application including CV and relevant scientific publications via the relevant job posting on DHI's website: <http://www.dhigroup.com/careers>
- Deadline for application is 1st of April 2026.
- For further information please contact Director of Environmental Science Anders Chr. Erichsen, AER@dhigroup.com.