



Hydrogeological services

sck: cen

Looking for models and insights that do hold water?

SCK CEN has been researching long-term management options for nuclear waste for years. This is also interesting for you as a non-nuclear professional. With more than 40 years of experience in hydrogeological research our scientists have amassed a wealth of knowledge for solving your problem.



Do you need help with predicting the migration of mass and energy through the subsurface?

We can estimate the fate of contaminants in the subsurface. You can count on plenty of knowledge and experience in building models on different scales and coupling processes.



Do you want to improve the quality of the outcome of your model based on subsurface data?

Based on 40 years of hydrogeological research, we use different types of subsurface data to improve the quality of various models all the time. We keep working on improving groundwater flow model parameterization at multiple scales.

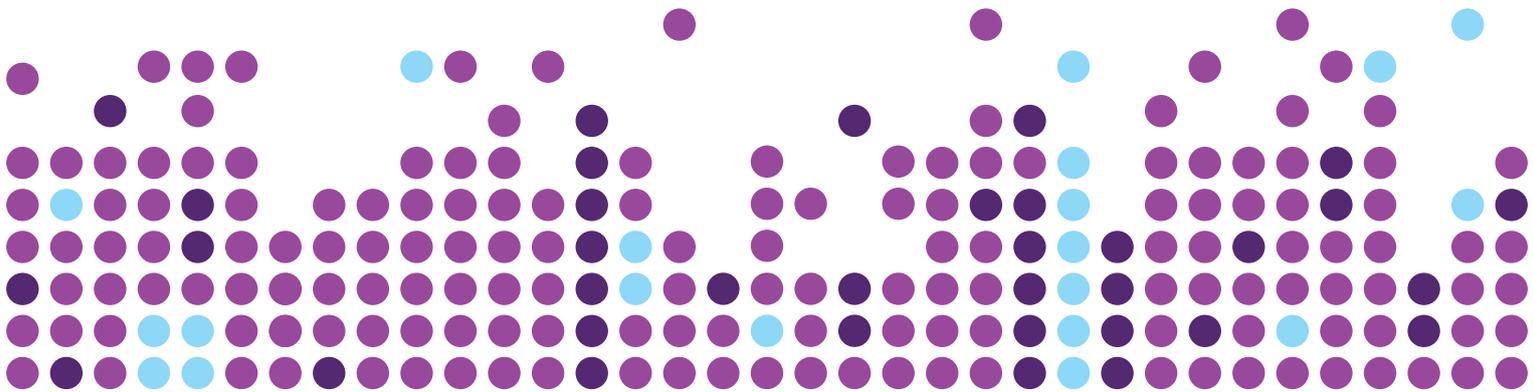


Do you need help with evaluating the uncertainty of your model outcome?

We have an extensive expertise in optimization and uncertainty quantification, even with computationally intensive models. What's in it for you? Enabling the explicit representation of aquifer heterogeneity in probabilistic process model inversion, for example.



SCK CEN is your dedicated research partner and knowledge expert for both surface and subsurface environmental challenges.





Three watertight solutions from SCK CEN

Process modelling

- Assessing the fate of contaminants
- Reactive transport codes (HPx, Yantra, MCP for MT3D)
- Coupling processes

Tap into our hydrogeological expertise and experience.



Model parameterisation

- Improving process model parameterization for detailed groundwater flow dynamics
- Geophysical data inversion
- Data science for reproducible hydrogeology
- Pore scale modelling

Get the data to estimate and secure the next phase of your subsurface project.

Advanced calibration, validation and verification

- Surrogate modelling for computationally expensive codes
- Probabilistic high-dimensional process model inversion
- Palaeohydrogeology as a tool to assess process model adequateness over large time scales
- Unconventional state variable observations to constrain groundwater flow and solute transport

Partner with SCK CEN and let us guide you to success.





Are you ready to get your project off the ground?

Whether you work for a private company, a governmental organisation or a university interested in research, our services provide the right knowledge and tools to examine a specific problem exhaustively.

Go to sckcen.be/hydrogeology to get started.

sck cen

Exploring a better tomorrow

The research activities of SCK CEN lead to valuable insights to support the performance and safety analyses of federal supervisory bodies and companies with various studies in the subsurface.

SCK CEN continuously collects, improves and shares knowledge through academic work, services and training opportunities.



+900

experts devote themselves every day to developing peaceful applications of nuclear energy



+650

scientific publications and presentations are created by our colleagues each year



60

countries across the world enjoy our nuclear research expertise