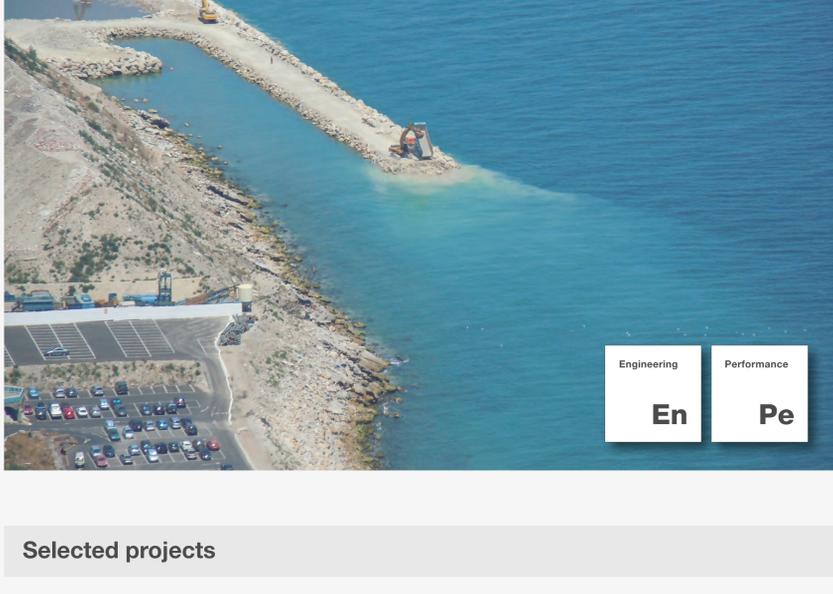


# Sediment, substance and heat transport

Simulation, consulting and planning



## Selected projects



- Baldeneysee – Measures to reduce Elodea growth:  
Construction of a three-dimensional numerical model, investigation of optimized measures to increase the flow and sediment transport with the aim of reducing algae growth
- Restoration of a Pier in the Geeste Estuary:  
Analysis of flow velocities and sediment transport in a three-dimensional model, investigation of the planned geometry of the port access and optimization of the planning with a focus on sediment transport

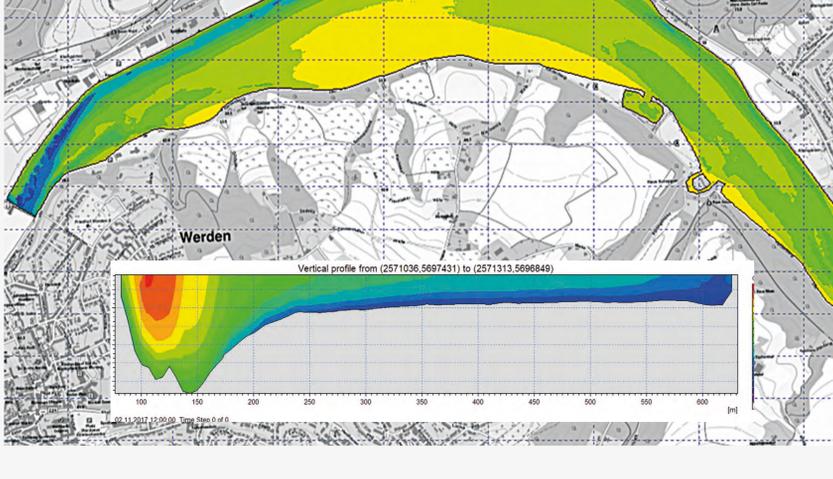


## Sediment, mass and heat transport

The transport of substances and heat in surface waters can be permanently changed by construction and development activities in the water body. In general, complex situations arise in the water body, which requires a high level of technical competence to assess the effects of the changes.

### Typical areas of application are:

- Sediment management in river basins and reservoirs
- Sediment management in port and coastal areas
- Assessment of the impact of local changes in water bodies (e.g. due to construction measures) on mass and heat transport
- Consideration of the structural and water quality of water bodies
- Recirculation studies for substances and heat
- Determination of bedload transport, e.g. during heavy rainfall events



## Solutions

Due to its high level of expertise and the use of numerical models, DMT analyses both the hydraulic situation and the prevailing transport mechanisms. This analysis generally allows optimisation of the planning and cost savings.

DMT supplies partial or complete solutions for the planning, forecasting and execution of water management projects with a focus on transport.

## Tools

Depending on the task, different transport models are used in the projects.

DMT has access to a large number of well-known and renowned numerical models such as MIKE and HEC-RAS.

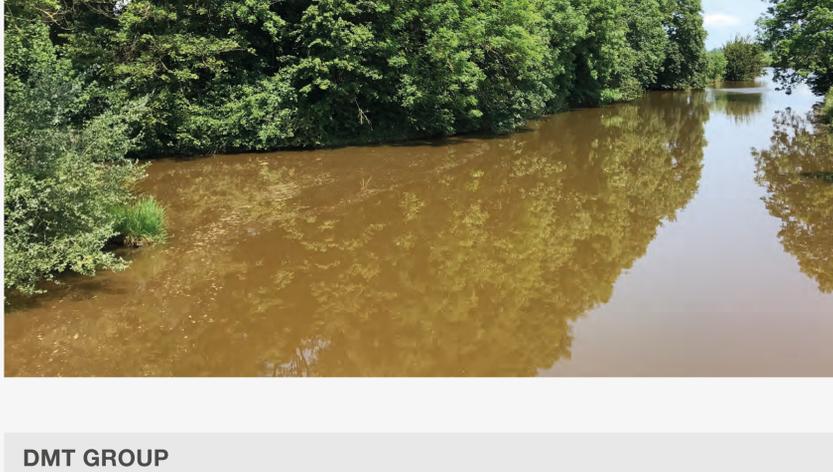


## Services

- Model based investigations
- Monitoring and project management
- Feasibility, preliminary and detailed design studies with cost estimates

### With the following focus:

- Simulation of transport processes in coastal areas and river basins
- Assessment and evaluation of erosion and sedimentation processes
- Hazard analysis for the laying of flow paths during heavy rainfall events
- Development of heat capacity plans
- Sediment transfer in natural rivers
- Substance dispersion forecast for accidental substance flow into water bodies



## DMT GROUP

Excellence and innovation in everything we do – this is our claim as an independent, global engineering and consulting company in the construction, mining, plant and mechanical engineering sectors. DMT is the “Engineering & Natural Resources” division of the TÜV NORD GROUP.

Sustainable value creation for our clients is always the goal – knowledge, digitalization and internationalization are our success factors. To this end, we count on our 1,100 employees, 14 subsidiaries, 30 locations and 280 years of experience.

In infrastructure, civil engineering and mining, we are general planners and specialists. We implement system and individual solutions in every discipline and bundle competencies for consulting, engineering, tendering, implementation, monitoring, operation and refurbishment, ensuring planning and investment safety for our customers.

We call this engineering performance.

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