CAM
COASTAL AQUIFER MANAGEMENT

Partner information

- **Coordination:**

  Prof. Dr. Hans Matthias Schöniger, Technische Universität Braunschweig, Leichtweiß Institute for Hydraulic Engineering and Water Resources, Division of Hydrology, Water Management and Water Protection.

- **German Partners:**

  ◊ Repository Safety Research Department, Global Research for Safety gGmbH (Köln)/ GRS

  ◊ OOWV Oldenburg-East-Frisian Water Board (Brake)/ OOWV

  ◊ Leibniz Institute for Applied Geophysics (Hannover)/ LIAG

  ◊ NLWKN Lower Saxony Water Management, Coastal Defense and Nature Conservation Agency (Aurich)/ NLWKN

  ◊ INSIGHT Geologische Softwaresysteme GmbH (Köln)/ INSIGHT

  ◊ GISCON Geoinformatik GmbH (Dortmund)/ GISCON

Partner information

- **International Partners in case studies:**

  ◊ Buffalo City Metropolitan Municipality, Eastern Cape, South Africa

  ◊ Rhodes University, Grahamstown, South Africa

  ◊ Akdeniz University, Faculty of Engineering, Antalya, Turkey

  ◊ Yildiz Technical University, Faculty of Engineering, Istanbul, Turkey

- **Countries of case studies:**

  North-Eastern Brazil, North-Western Germany, Turkey (Antalya) and South Africa (Eastern Cape).

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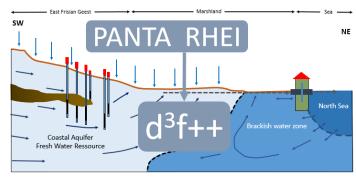## go-CAM
Implementing strategic development goals in coastal aquifer management

The online platform CAM (Coastal Aquifer Management) was developed in the framework of a joint research project (called go-CAM) to enable processing the outputs of hydro(geo)logical models using multi-criteria decision analysis techniques (MCDA) and evaluating/analyzing the processing results to strengthen transparency and objectivity in decision-making procedures among stakeholders in the water sector of coastal regions.

Our groundwater model d3f++ (distributed density-driven flow) and PANTA RHEI (deterministic semi distributed hydrological model).

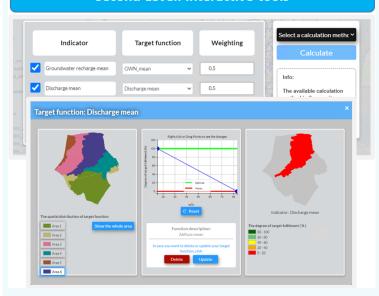The CAM platform can be divided into four levels:

1. Data import of calculated water indicators from scenarios, objective functions, additional metadata.

2. Interactive selection, parameterization of the

objective function and weighting of the indicators. The main challenge here was to integrate the interactive tools, which use multi criteria decision analysis techniques (MCDA) to evaluate data. One objective function can be assigned to each selected indicator. But, these objective functions could be also regionally distributed.
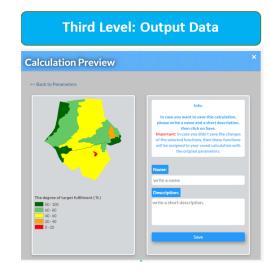
First Level: Uploading Data

Second Level: Interactive tools

3. Providing an output (calculation result) after using the input indicators from level 1 and the selected options from level 2. The calculation results can be previewed and saved for later analysis.

Third Level: Output Data

4. Dialog process: Interactive comparison of results by participating groups of actors.

Fourth Level: Comparing results

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