



## Partner information

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- **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

- **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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# GRoW

WATER AS A GLOBAL RESOURCE

# FONA

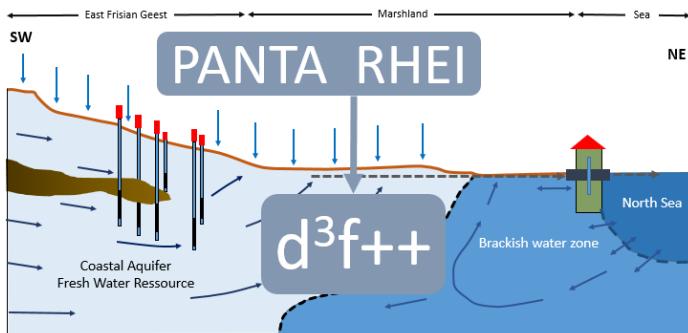
Research for Sustainability

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

[www.gocam.giscon.de](http://www.gocam.giscon.de)

## CAM dialogue platform

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

## CAM dialogue platform

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

| Indicator   | Target function | Weighting |
|---|-----------------|-----------|
| <input checked="" type="checkbox"/> Groundwater recharge mean | GWN_mean        | 0.5       |
| <input checked="" type="checkbox"/> Discharge mean            | Discharge mean  | 0.5       |

Select a calculation method: [Dropdown]  
Calculate

Info:  
The available calculation [Dropdown]

Target function: Discharge mean

The spatial distribution of target function: [Map]  
Show the whole area

Function description: Adfluss mean  
In case you want to delete or update your target function, click [Delete] [Update]

Right click or Drag Points to see the changes

Degree of target fulfillment (%)

Legend: 80-100 (Green), 60-80 (Yellow), 40-60 (Orange), 20-40 (Red), 0-20 (Dark Red)

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.

## CAM dialogue platform

### Third Level: Output Data

Calculation Preview

<< Back to Parameters

The degree of target fulfillment (%)

Legend: 80-100 (Green), 60-80 (Yellow), 40-60 (Orange), 20-40 (Red), 0-20 (Dark Red)

Info:  
In case you want to save this calculation, please write a name and a short description, then click on Save.  
Important: In case you didn't save the changes of the selected functions, then these functions will be assigned to your saved calculation with the original parameters.

Name: [Text input]  
write a name

Description: [Text input]  
write a short description.

Save

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

### Fourth Level: Comparing results

go-CAM

Calculation for User: admin | Calculation for User: keijg

The degree of target fulfillment (%)

Legend: 0-20 (Dark Red), 20-40 (Red), 40-60 (Orange), 60-80 (Yellow), 80-100 (Green)