

Working with boards

The project will call for an interactive work with boards representing science, administration and the technical society of the investigated areas. Adapting to climate changes is a start of a new process. Examples of board members:

Ministry of Environment,

The association of public administrators

The farmers associations

The forest owners ,

Association of geotechnical and building engineers

Association of larger and smaller water-works

Municipalities of the pilot areas

Universities

The institute of Climate research



Transnational innovation is needed.
The project partly builds upon knowledge and partners from former Interreg projects.



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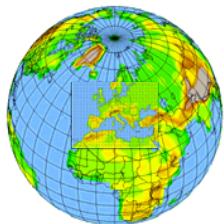
CLIWAT - a transnational project in the North Sea Region



<http://cliwat.eu>



Cliwat



Climate change simulations indicate that rainfall will increase in the North Sea region, however with significant seasonal variations.

Regional climate model HIRHAM. This will lead to higher groundwater levels (up to one meter), higher flux to rivers/coastal waters and a forced outwash of nutrients and pollutants from industrial areas, agriculture and landfills. Conditions for the design of roads, buildings etc. will change.

We will predict how the future climate affects the groundwater, marine and fresh water quantity and quality and how we deal with the changes. Also we will look into which areas in the region there is need for new legislation or new standards for engineering of drainage, building of roads and buildings.

Main aims

The project will focus on determining the effects of climate change on groundwater systems and through this on surface water and water supply. Furthermore, challenges and solutions for engineering design of buildings, roads etc. will be elaborated.

We also will include investigations on the forced leaching from point sources and agricultural sources into the hydrological system (incl. rivers and lakes).

Challenges

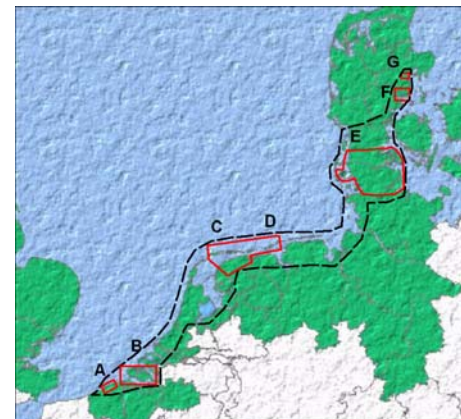
The climate changes will affect the assessment of suitable industrial and agricultural development areas due to changes in the shape of the local waterworks catchments areas. Rise in groundwater level will challenge the construction business and it will be necessary to come up with new standards. It will also change the available groundwater resource and pattern of stream flow between summer and winter (reduced potential for irrigation from water table aquifers interacting with streams).

Objectives

- Incorporate the effect of the increased flux from agricultural and industrial land sites and landfills on groundwater quality in relation to indicators in the WFD
- Method development
- Impact on waterworks and important ground water aquifers near the coastline.
- Potential towards more accessible water in the hydrological system.

drological system.

- Assess the consequences of the increased recharge to groundwater systems and how to manage and solve the up coming challenges for the construction business, for drainage and changes in conditions for biological/chemical decomposition in the soil.
- Recommendations towards the actions that needs to be taken due to climate changes in groundwater systems.



Area of investigation is marked by a red line. The black dotted area outlines the area where the results will be upscaled.



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