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### Abstract

Although many aspects of coastal research are decision relevant, scientific results cannot be directly transferred into practice.

Thus, an additional dialogue infrastructure is needed to make coastal research useful:

### The Northern German Climate Office:

1700 registered users – eight user groups → Figure 1

Dialogue process and communication formats → Figure 2 and 8

Various communication formats have been developed and tested:

- public events
- individual requests
- interviews
- stakeholder workshops and expert interviews

→Information demands of different stakeholder groups have been identified (Fig. 2) to develop decision relevant information products which may serve a broader group with similar information (Fig 5-7).

Overarching demands for regional climate services are:

- 1.Trustworthiness
- 2.Comprehensibility
- 3.Relevance

### Addressing stakeholder demands

#### 1) Regional assessment reports as basis of trustworthiness

Scientific knowledge on coastal climate is widely scattered. Scientific agreement / disagreement is not documented on regional scales. A systematic assessment process is needed to document consolidated scientific knowledge. Three regional assessment reports have been published, so far (→Fig. 3):

- Metropolitan Region of Hamburg
- Baltic Sea Basin (BACC I and II)
- Another assessment report for the North Sea Region (NOSCCA) is in press (2016). The reports have been adopted for political planning processes by the Hamburg senate and HELCOM.

#### 2) Understandable summaries in national language ensure comprehensibility

##### Booklets, brochures & websites on regional climate change:

Main research results on regional climate change in Northern Germany and sub regions are summarized in understandable booklets, brochures and websites in national languages (Fig. 4). The scientific knowledge mainly comes from the regional assessment reports (1).

##### Regional climate scenarios in practice - understandable explanations on the methods

Still, there are many stakeholders waiting for more precise “forecasts” of climate change, rather than learning to plan with uncertainties. In these brochures we focus these issues and give some good practice examples of using regional climate scenarios in practice.

#### 3) Interactive web-tools on regional specific data analyses as basis for relevance

**norddeutscher-klimamonitor.de** is an interactive web-tool on recent climate state, variability, changes and consistency with scenarios. Basis are observations and regional reanalyses of the last 60 years.

**norddeutscher-klimaatlus.de** is an interactive web-tool on possible future climate change in Northern Germany. Basis are more than 120 regional climate projections (SRES and RCP).

**kuestenschutzbedarf.de** is an interactive web tool on recent and possible future coastal protection needs in Northern Germany. Basis are actual water levels and possible future changes.



Fig 5.: Screenshot www.norddeutscher-klimamonitor.de



Fig 6.: Screenshot www.norddeutscher-klimaatlus.de



Fig 7.: Screenshot www.kuestenschutzbedarf.de

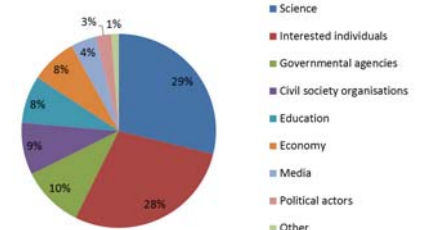


Fig. 1.: User groups of the Northern German Climate Office N=1690 (18.08.2016)

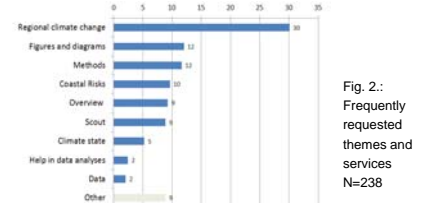


Fig. 2.: Frequently requested themes and services N=238



Fig 3.: Regional assessment reports (www.klimabericht-hamburg.de)

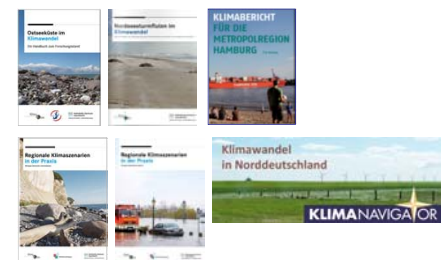


Fig 4.: Understandable summaries

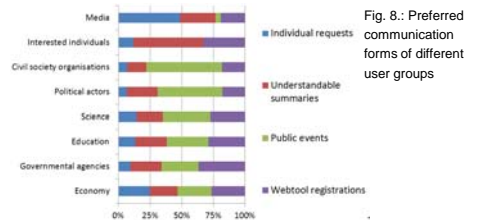


Fig. 8.: Preferred communication forms of different user groups

### Conclusion and Summary

- Besides coastal & climate research a long term dialogue infrastructure is needed to make research usable in practice.
- In a long term dialogue process (since 2006) user demands were localized and different communication forms were developed and tested.
- All communication forms are requested & needed
- Each user group prefers certain communication forms (Fig. 8: no “one fits for all!”).